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Enlistment Among Applicants for Military Service

Determinants and Incentives

Bruce R. Orvis, Martin T. Gahart

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The research described in this report was sponsored by the Assistant Secretary of Defense (Force Management and Personnel). The research was conducted in the National Defense Research Institute, RAND's federally funded research and development center supported by the Office of the Secretary of Defense and the Joint Chiefs of Staff, Contract No. MDA903-85-C-0030.

ISBN: 0-8330-1054-9

The RAND Publication Series: The Report is the principal publication documenting and transmitting RAND's major research findings and final research results. The RAND Note reports other outputs of sponsored research for general distribution. Publications of The RAND Corporation do not necessarily reflect the opinions or policies of the sponsors of RAND research.

Published by The RAND Corporation
1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138

R-3359-FMP

Enlistment Among Applicants for Military Service

Determinants and Incentives

Bruce R. Orvis, Martin T. Gahart
with Karl F. Schutz

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January 1990

Prepared for the
Assistant Secretary of Defense
(Force Management and Personnel)

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PREFACE

This report presents findings on three research issues, drawing primarily on results from the 1983 Survey of Military Applicants, a survey of male youths without prior military service who took the written test to qualify for the military. The survey was undertaken in conjunction with the Enlistment Bonus Test, a nationwide experiment on the effectiveness of various cash enlistment bonuses. First, the survey was designed to provide information about the implementation of the test programs. Information concerning the degree and sources of awareness about the bonus programs is important in interpreting the outcome of the bonus test, but cannot be obtained directly from the test results. Second, the survey also was designed to provide information on the factors that lead nonprior service applicants to enlist. Results from the 1981 Applicant Survey indicated that nearly one-half of male applicants do not enlist and suggested that the factors leading applicants to enlist may differ from those leading persons to take the written test. Moreover, the impact of service admission and training policies may differ before and after applicancy, leading different types of individuals to drop out at these different points in the enlistment process. These issues underscore the importance of analyzing the post-application enlistment decision process. Finally, the survey was designed to provide information enabling the development and evaluation of methods of using survey enlistment intention responses to questions about the likelihood of enlisting under specific hypothetical options to help predict the effect of implementing these options. The report presents results on these methods, drawing on data from the 1983 and 1981 Applicant Surveys and the 1981 Grey Advertising National Survey.

This study was sponsored by the Assistant Secretary of Defense, Force Management and Personnel, and was carried out in the National Defense Research Institute, RAND's OSD-supported federally funded research and development center. A more detailed discussion of the history and results of the Enlistment Bonus Test is presented in a RAND report by J. Michael Polich, James N. Dertouzos, and S. James Press, *The Enlistment Bonus Experiment*, R-3353-FMP, April 1986.

SUMMARY

During the past few years, Congress has considered numerous programs that would expand military enlistment benefits, particularly programs that offer cash enlistment bonuses or pay for post-service college or vocational training. In 1982–1984, the United States Army carried out a congressionally mandated Enlistment Bonus Test to compare the effects of alternative bonus programs. A joint RAND Corporation and Defense Manpower Data Center (DMDC) survey of applicants for military service was conducted in conjunction with RAND's analysis of the test programs.[1]

The purpose of the Enlistment Bonus Test was to estimate the effectiveness of various cash enlistment bonuses in increasing high quality enlistments,[2] filling selected occupational specialties in the military services, and encouraging longer terms of enlistment.[3] Bonuses offered under the test programs were available only to qualified Army enlistees enrolling in eligible occupational specialties. Specifically, the test evaluated the effectiveness of three bonus programs: (a) $5000 bonus for a four-year enlistment (the program in place prior to the start of the test); (b) $8000 bonus for a four-year enlistment; and (c) $4000 for a three-year enlistment.

The 1983 Survey of Military Applicants (1983 Applicant Survey) was designed to complement the test by providing information for the following analyses:

- Assess the uniformity of implementation of the test programs among applicants, including the proportion of high quality Army applicants in each test cell who were aware of the programs, who recalled being told about the programs by recruiters, and who recalled advertising that promoted the bonus programs;
- Identify economic, educational, and demographic factors that distinguish applicants who enlist from those who do not enlist; and

[1]Applicants for military service are individuals who have completed the first two required steps in the enlistment process: They have seen a military recruiter and have completed the Armed Services Vocational Aptitude Battery (ASVAB), a three-hour written examination. See Berryman, Bell, and Lisowski (1983).

[2]"High quality" refers to high school diploma graduates with Armed Forces Qualification Test (AFQT) scores above the 49th percentile.

[3]See Polich, Dertouzos, and Press (1986).

- Develop methods of using survey responses to questions about the likelihood of enlisting under specific hypothetical options to help predict the effect of implementing these options and, thus, aid in the design and interpretation of field tests such as the Enlistment Bonus Test.

The survey consisted of a 40-minute computer-assisted telephone interview that was administered to a stratified random sample of persons who took the required written test for entrance into the military—the Armed Services Vocational Aptitude Battery (ASVAB)—in April 1983. The sample was composed of men who (a) were testing for the first time to qualify for the active duty Army, Navy, Air Force, or Marine Corps and (b) scored high enough on the Armed Forces Qualification Test, a component of the ASVAB, to be eligible to enlist. In total, 6857 applicants were surveyed, representing a response rate of 91 percent. Most persons were interviewed at their civilian addresses; however, 2 percent of the applicants had gone on active duty and were interviewed at basic training. The average time between the ASVAB test date and the interview was four weeks.

Our analysis of the Applicant Survey data showed that the three Enlistment Bonus Test programs were implemented uniformly among high quality Army applicants and that enlistment bonuses were emphasized by Army recruiters. About two-thirds of the high quality Army applicants reported discussing the bonuses with recruiters. This level seems sufficiently high to suggest that recruiters promoted the programs, given that only 30 percent of the total male nonprior service Army enlistments in the year preceding the test were in occupational specialties qualified for the programs. Thus, we would not expect all of the applicants to have been informed of the bonuses.

A similar number of the high quality Army applicants reported overall awareness of the programs. Nearly all of the applicants reporting awareness of the programs said they were told about bonuses by recruiters; in contrast, only one-third of those not discussing enlistment bonuses with recruiters reported awareness of the programs. Moreover, only one-third of the high quality Army applicants recalled mass media advertising that promoted bonuses. These results suggest that recruiters were the main source of information about the existence of the programs. Most of the applicants who were aware of the programs had some knowledge of their specific features, such as the dollar value of the bonuses or the fact that only some jobs qualified.

The recruiter discussion rates and the levels of awareness of the programs and their specific features were uniform across the test cells. The high level and uniformity of awareness support the validity of the

test by providing evidence that supports the attribution of differences in the enlistment rate among the three cells to the differences in their respective bonus programs rather than to differences in information about those programs. Conversely, the results suggest that an absence of effects cannot be attributed to a lack of awareness about the programs among high quality Army applicants.

Despite the interest in military service that application implies—and the time invested in such persons by recruiters and ASVAB administrators—nearly half of all high quality male applicants do not enlist. Regression analyses of the enlistment decisions of our high quality applicants provided considerable evidence that background factors substantially affect the applicants likelihood of enlisting. For example, among both high aptitude[4] high school seniors and graduates, the applicants we predicted to be least likely to enlist on the basis of their background characteristics—i.e., the lowest one-fifth in the distribution of predicted enlistment probabilities—had an actual enlistment rate of less than 30 percent, whereas those predicted to be most likely to enlist—the upper one-fifth of the distribution—enlisted at a rate of about 80 percent. Given the apparent interest of high quality male applicants in enlisting—they met with recruiters and took the ASVAB—and the fact that they are almost all eligible to enlist, the wide variation in post-application enlistment rates is notable and somewhat surprising.

The results indicate that, even after application, civilian job opportunities, social support for enlisting, college plans, and finances have substantial effects on the enlistment decisions of young men. This implies that messages emphasizing the job stability, training, and educational opportunities provided by the military could be effective in advertising and recruiting efforts. Moreover, given the social support findings, it appears that such messages could be directed usefully at persons likely to discuss enlistment with the applicant, such as family members and teachers, as well as toward the applicant himself.

Finally, a major part of the analysis was to develop improved methods of analyzing survey responses to questions about the likelihood of enlisting under specific hypothetical options. The goal was to determine the potential applicability of such methods in anticipating the effects of alternative options, choosing options for testing, and designing field tests of options, such as the Enlistment Bonus Test. Two analytical approaches were developed. One, a simple approach, treated respondents with the same stated enlistment intention as being

[4]"High aptitude" refers to persons scoring above the 49th percentile on the AFQT, in categories I-IIIA.

equally likely to enlist. The second used the respondent's background characteristics to help determine his enlistment probability.

The 1983 Applicant Survey asked a series of questions about respondents' enlistment intentions under the then current incentive programs and under more generous hypothetical options. Similar information was collected in the 1981 Applicant Survey and in the 1981 Grey Advertising National Survey. This made it possible to use our analytical approaches to compare responses to one kind of option relative to another—for example, to compare responses to enlistment bonuses versus educational benefits—across the three databases. At the same time, we were able to use the national data to assess how closely enlistment increases predicted from the survey responses approximated actual increases observed in field tests of specific enlistment options.

Our analyses of responses across the three databases suggest that survey data can provide reliable predictions of the effect of one type of option relative to another. This implies that survey analyses can be helpful in selecting among alternative options to get the best enlistment results for available funds. Moreover, our comparisons of enlistment increases predicted from survey responses with actual increases observed in field tests also support the usefulness of survey results. We compared predicted enlistment increases with actual increases for the Ultra-VEAP Kicker option (i.e., $20,100 option) of the Educational Assistance Test Program and for the $8000-four-year option of the Enlistment Bonus Test.[5] The survey approach estimated the effects of the Ultra-VEAP Kicker program at 7.9 percent and the $8000 bonus program at 2.1 percent. The actual enlistment increases determined in the field tests were 8.7 percent and 4.1 percent, respectively.[6] The analysis relies on a number of important assumptions. However, the findings suggest that the survey method can approximate the results of field tests reasonably well. Such approximations, were they available in the development phase of field tests, might save a considerable amount of time and money in designing and carrying out the tests. Moreover, survey results could be used as a supplemental data source to evaluate the effects of a broader spectrum of potential options than would be feasible to test directly in the field.

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[5]Fernandez (1982) and Polich, Dertouzos, and Press (1986) provide a more complete explanation of these options.

[6]The 4.1 percent figure was derived by adjusting the observed enlistment results statistically for several factors, including patterns of recruiting behavior under more favorable market conditions that act to mask the full market expansion potential of the bonuses (see Polich, Dertouzos, and Press, 1986). The result is that the survey estimate for the bonus—which does not adjust for recruiter behavior—will be somewhat smaller than the results reported from the field test for ideal conditions.

ACKNOWLEDGMENTS

This study was made possible by the support of Captain Louise Wilmot, formerly Deputy Director of Accession Policy, and by Zahava Doering, then Chief, Survey and Market Analysis Division, Defense Manpower Data Center (DMDC). We are also grateful to David Boesel and John Richards, who worked with us to plan and conduct the survey, and to Robert Brandewie, Helen Hagan, and Leslie Willis, all of DMDC, who performed several important analyses on a timely basis.

In the execution of the study, the Military Entrance Processing Command provided data for constructing a representative sample of military applicants. We were aided in particular by Walter Knutson, who arranged for cooperation from the nationwide network of Military Entrance Processing Stations, and by Kenneth Clifton, who provided us with weekly computer records of the applicant population. Special thanks go to the entire organization of Amrigon, Inc., which conducted the telephone interviews of the applicants. Directed by Ronald and Richard Smith, Amrigon carried out the interviewing with admirable speed, dedication, and thoroughness.

At RAND, we are grateful to our colleague James Hosek for his valuable advice and support throughout the course of the project, Richard Buddin and Linda Waite for their helpful reviews of this report, to Jeffrey Garfinkle and Carolyn Lee for their assistance in analyzing the results, and to our editor, Jeanne Heller. A great deal of credit goes to Kerrie Avery, Marilyn Yokota, Linda Daly, Jan Iverson, and Joanna Campbell, who assisted in the preparation of this report. Finally, Jennifer Hawes deserves special recognition for her outstanding contribution to this research. Working in RAND's Washington office in 1983, she played a central role in acquiring the information needed to conduct the study, scheduling key events, and coordinating the execution of all phases of the project with DMDC.

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I. INTRODUCTION

BACKGROUND

Congress and the services have been interested during the 1980s in expanding enlistment incentives. Incentives such as cash enlistment bonuses or educational benefits—which pay for postservice college or vocational training—have been proposed as a means of increasing the number of enlistments by "high quality" youth (those who complete high school and score in the upper half of the distribution on the Armed Forces Qualification Test). Moreover, incentives could help attract recruits into hard-to-fill occupational specialties.

In 1981, Congress directed the Secretary of Defense to evaluate the effect of offering larger enlistment bonuses. The Department of Defense therefore authorized the U.S. Army to expand its existing bonus program in order to conduct an experimental Enlistment Bonus Test. The test—conducted from July 1982 through June 1984—was designed to compare enlistment results for three bonus plans. The plans included the "control program" already in place and two experimental programs, which differed in the maximum bonus paid and the length of service required for eligibility. It was recognized, however, that the test could not answer all of the questions that would arise in evaluating the programs and designing new legislation. Therefore, the Defense Manpower Data Center (DMDC) and the Office of Accession Policy asked RAND to assist them in conducting a nationwide survey of military applicants (persons who have taken the written test to qualify for military service) in the spring of 1983.

The Applicant Survey was designed to complement the test by ascertaining the extent to which applicants had been informed about the availability of the bonuses and the specific features of the bonus plans by recruiters and advertising. More broadly, the survey was intended to help interpret the test results by providing insight into the choice processes of young men as they make decisions about military service.

THE ENLISTMENT BONUS TEST

The purpose of the Enlistment Bonus Test was to estimate the effectiveness of various cash enlistment bonuses in increasing high quality enlistments, filling selected occupational specialties in the military

services, and encouraging longer terms of enlistment. Many questions in the 1983 Applicant Survey were based on the particular features of the bonus plans included in the test. These plans included a "control" program and two experimental programs, offered in balanced sets of geographical areas. The control program ("A" cell) offered $5000 to high quality Army recruits who enlisted for four years in designated occupational specialties. The other two test programs, identified by the terms "B" and "C" cells, paid larger bonuses. The B cell program paid an $8000 bonus for four-year enlistments in designated specialties. The C cell program also paid an $8000 bonus for four-year enlistments; however, it provided a $4000 bonus for three-year enlistments in the designated specialties, a feature designed to enhance its attractiveness. The general features of the bonus programs are summarized in Table 1.1. The occupational specialties eligible for enlistment bonuses were all directly combat-related, principally the primary combat specialties of infantry, armor, and artillery. Covered specialties accounted for about 30 percent of all high quality Army enlistees in the baseline year, July 1981 through June 1982

To compare the effects of the programs on recruiting, RAND devised a plan for allocating the programs to geographical areas that were balanced on regional location and other factors affecting recruiting, such as economic conditions, sociodemographic factors, and Army recruiting input (Polich, Dertouzos, and Press, 1986). The plan offered each program in a geographically dispersed set of areas. The control (A) cell contained the largest portion of the nation, representing 70 percent of the recruiting market. The experimental cells contained much smaller areas, 15 percent each. The areas composing each cell are shown in Fig. 1.1. RAND monitored the high quality enlistment rate in each cell to assess the impact of the bonus programs. The

Table 1.1

ARMY ENLISTMENT BONUS TEST CELLS

	Test Cell	Percent of Nation in Test Cell	Bonus Amount ($)[a] 4-Year Enlistment	Bonus Amount ($)[a] 3-Year Enlistment
A	Control	70	5000	0
B	Increased 4-year bonus	15	8000	0
C	Increased 4-year + 3-year bonus	15	8000	4000

[a]Amount paid to high quality enlistees in eligible specialties.

results of the Enlistment Bonus Test are documented in a separate RAND publication (Polich, Dertouzos, and Press, 1986).

RESEARCH OBJECTIVES

Our research had several objectives. First, the efficacy of the Enlistment Bonus Test depended on the extent and uniformity of its implementation. The survey provided important information on this point. One aspect of the study concerned the extent to which Army recruiters actually implemented enlistment bonuses as an incentive to attract prospective enlistees into the service. Implementation covers both the percentage of applicants with whom the bonuses were discussed and whether the different bonus test programs were emphasized equally by recruiters. A second aspect concerned the level and uniformity of applicants' knowledge about the plans and their specific details. A third concerned the level and uniformity of applicants' awareness of advertising that promoted the bonus plans.

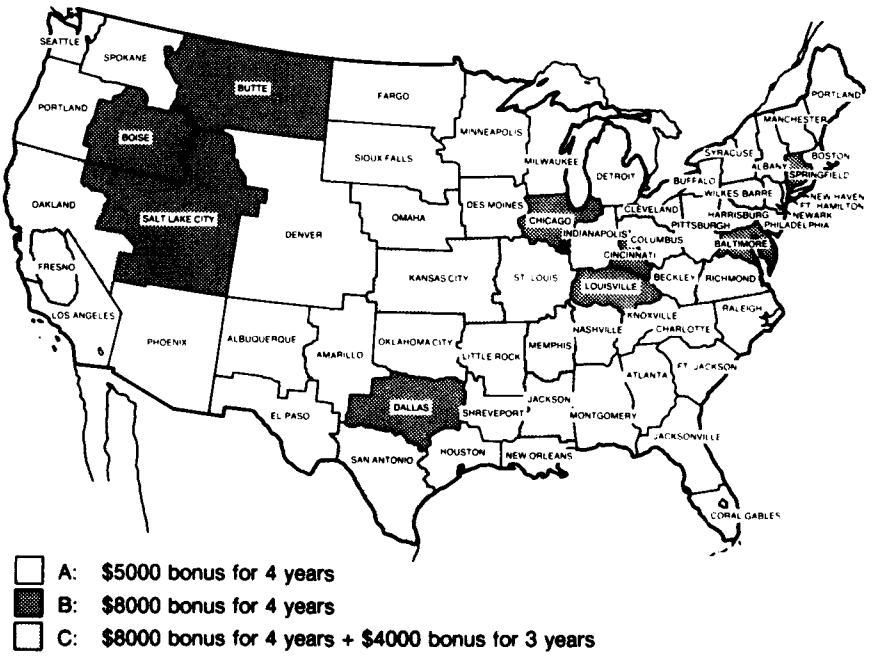


Fig. 1.1—Enlistment Bonus Test Design

Another objective of the research was to provide insight into why nearly half the high quality applicants fail to enlist. For example, how well do the applicants succeed in the labor market? What are the educational aspirations of the applicants and to what extent do they need financial assistance to realize those aspirations? To what extent and in what ways do the enlistment decisions of the applicants vary with these factors? Military Entrance Processing Station (MEPS) Reporting System records allow us to track individuals through the successive steps of the enlistment process—from written qualifying test, to physical examination, to detailed discussion of jobs and enlistment options with a military job counselor, to the actual decision point—and, together with the survey results, to examine enlistment rates according to specific background factors.

The third objective of the research was to assess the potential usefulness of enlistment intention information in helping the Department of Defense choose options to attract prospective enlistees and to design field tests of those options. The survey assessed the strength of respondents' enlistment intentions under existing incentives and also asked how likely they would be to enlist under a variety of hypothetical options, including several dollar values of cash enlistment bonuses and postservice educational benefits. These data were combined with similar results from the 1981 Applicant Survey and the 1981 Grey Advertising National Survey, a representative national survey of men, 16 to 20 years of age, who had never served in the military. This made it possible to compare responses to alternative types of options, to check the consistency of responses across the three databases, and to compare enlistment increases predicted from the survey data with the actual increases observed in field tests of specific enlistment options.

1983 APPLICANT SURVEY

This section briefly describes the 1983 Applicant Survey, including sample selection and interviewing procedures. More details are given in App. A. The questionnaire is contained in App. B.

Sample Selection and Field Interviewing

As discussed below, our sample was drawn from persons taking the enlistment qualification test (the Armed Services Vocational Aptitude Battery or ASVAB) during April 1983. A 40-minute computer-assisted telephone interview of the sampled applicants was conducted from 21 April through 22 June 1983. The average time between the ASVAB

test date and the interview date was four weeks. RAND and DMDC designed and managed the survey; however, the actual field interviewing was carried out by Amrigon, a professional survey organization acting as a contractor to DMDC. Amrigon collected the survey data using its central computer-assisted telephone interviewing facility. Interviewers for the study were trained and supervised by experienced survey administrators who, in turn, worked with RAND and DMDC staff members.

At the interview date, the applicants fell into one of three categories: (1) applicants who had *not* enlisted; (2) applicants who had enlisted and were in the Delayed Entry Program (persons waiting to go on active duty); and (3) applicants who had enlisted and were on active duty (individuals at basic training). Special scheduling arrangements were made to interview new enlistees before they entered basic training. The arrangements were highly successful; only 2 percent of the sample went on active duty before an interview could be conducted at their civilian addresses. These individuals were interviewed at their basic training bases.

In total, 6857 respondents were interviewed, a response rate of 91 percent. The refusal rate was very low, less than 2 percent. The high response rate assured that the representativeness of the sample was not disturbed by the interviewing process. As detailed in App. A, the distributions of age, race, education, and AFQT category[1] are very similar for the full group of ASVAB examinees meeting the study eligibility criteria and the respondents to the 1983 Applicant Survey. Thus, weighting of the survey results to achieve representativeness was not required.

To be eligible for the study, applicants had to be nonprior service men—i.e., men who had never served in the military—who took the ASVAB at a MEPS or Mobile Examining Team (MET) site (i.e., took a *production* ASVAB) in the continental United States for the first time in April 1983; were processing for the active duty Army, Navy, Air Force, or Marine Corps; and scored in AFQT categories I-IV. We sampled only first test, nonprior service youths because we were interested in the effect of enlistment bonuses on first time enlistment decisions. Individuals completing institutional (i.e., high school) ASVAB administrations were not included in the sampling frame because they represent only a small portion of the enlistees and because the ASVAB is routinely administered to high school students in many localities. Given the nonselective nature of these administrations, examinees may

[1]*The Armed Forces Qualification Test* (AFQT) score is derived from the Armed Services Vocational Aptitude Battery (ASVAB).

not have a serious interest in military service, may not have contacted recruiters prior to the test, and may differ in other fundamental ways from production ASVAB examinees. The sample was restricted to males because females constitute a small minority of the ASVAB examinees and were ineligible for the jobs offering special enlistment bonuses (i.e., combat-related jobs). Locations in the continental United States were used exclusively since they make up almost all of the testing sites and are easier to reach by telephone. Applicants scoring in AFQT category V were excluded since by law they are ineligible for military service. Finally, because we were interested in active duty service, we eliminated persons testing for the Reserve or National Guard.

The Questionnaire

Two versions of the questionnaire were used in interviewing, one form for applicants who had not enlisted at the time of the survey, the other for those who had enlisted. (The nonenlistee version is shown in App. B.)

The interview contained the following sections:

- *Enlistment status*: Enlistment information and service choice; likelihood of enlisting in the near future (for nonenlistees).
- *Recruiting data*: Contacts and discussions with recruiters; military physical examination history; military job counselor contacts.
- *Civilian job and education history*: Labor force status and experience; perceptions of job opportunities; educational background and aspirations; perceptions of finances needed to continue schooling; ability to pay for continued education.
- *Military benefits*: Awareness of enlistment bonus programs; knowledge of specific features of bonus test programs; likelihood of enlisting under possible new educational benefit and enlistment bonus options.
- *Background*: Demographic information and family characteristics.

PLAN OF THE REPORT

Section II gives the results of the 1983 Survey of Military Applicants as they relate to the implementation of the Enlistment Bonus Test. Section III examines the importance of employment variables, educational aspirations, and other factors in the enlistment decisions of

applicants for military service. Section IV develops methods of interpreting enlistment intention responses to hypothetical enlistment options, and explores the usefulness of enlistment intention information in choosing and evaluating options for future implementation. In Sec. V we summarize our results and present our conclusions.

II. IMPLEMENTATION OF THE ENLISTMENT BONUS TEST

For bonus programs to be effective, eligible individuals must be aware of them. Moreover, to meaningfully compare the effects of the three test programs, awareness levels must be uniform across the test cells. Uniform implementation allows enlistment differences among test cells to be attributed to the test programs. In contrast, uneven implementation raises the possibility that enlistment differences are due to differences in what people knew about the programs. Full evaluation of implementation requires that awareness of the test programs be assessed for the population of all young nonprior service men, that is, for both applicants and persons not applying for military service. This is obviously beyond the scope of the Applicant Survey. However, the current analysis assesses implementation among those most immediately affected, high quality Army applicants who have tested and are deciding whether or not to enlist.

Our analysis of the implementation of the Enlistment Bonus Test programs among high quality Army applicants includes an evaluation of the extent to which Army recruiters mentioned the bonus as an enlistment inducement and the extent of any variations in respondents' awareness of the different test programs. We also assess respondents' awareness of advertisements promoting the bonus programs, and explore their understanding of specific features of the programs, such as monetary value and eligibility restrictions. The analysis is limited to high quality Army applicants because they were the only ones eligible for the special programs. Thus, the analysis uses data from 1365 respondents. This represents 20 percent of the full sample (N = 6857), since approximately 46 percent of the sample applied for enlistment in the Army and 43 percent of the Army applicants were high quality.

AWARENESS OF ENLISTMENT BONUS PROGRAM

Figure 2.1 shows the percentage of high quality Army applicants in each of the three test cells who were aware of the availability of enlistment bonuses. The first group of bars indicates the overall awareness level. The second group indicates the percentage of applicants reporting they had been told about the enlistment bonus program by an Army recruiter.

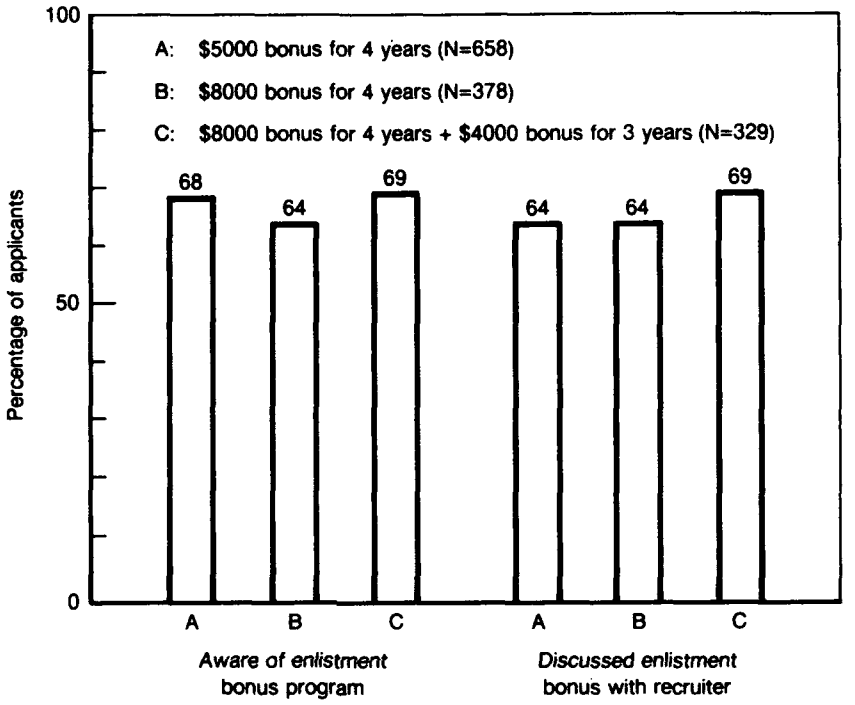


Fig. 2.1—Awareness of enlistment bonus program by test cell (high quality Army applicants)

The results convey three major findings. First, about two-thirds of the high quality Army applicants report they were aware of the enlistment bonus program and a similar percentage report that they discussed the program with recruiters. Although it is difficult to justify a precise level of awareness that would indicate the test had been implemented satisfactorily, two-thirds awareness seems reasonably high given that the occupational specialties eligible for the bonus programs accounted for only 30 percent of the enlistees in the year preceding the test. The Army would not be expected to attempt to interest all potential enlistees in these occupations, and, therefore, we would not expect all applicants to be informed of the bonuses. The second major finding is that awareness levels and discussion rates are uniform and statistically equivalent across the three test cells (chi-square = 2.1, df = 2, ns, and chi-square = 3.3, df = 2, ns, respectively, where df = degrees of freedom and ns = not significant). This lends confidence that

differences in enlistments among the test cells reflect the effects of the programs, rather than differences in what people knew about the programs. The third finding is that recruiters appear to be the main source of information about the bonus programs, at least among applicants. As seen in Fig. 2.1, the recruiter discussion rates are nearly identical to the reported awareness rates. Moreover, whereas more than 80 percent of those aware of the program report they were told about enlistment bonuses by Army recruiters, only one-third of those not told about bonuses by recruiters were aware of their existence. Together with the low level of awareness of advertising promoting the bonuses—discussed below—and equivalent rates of recruiter bonus discussions independent of advertising awareness (among those aware of the program), these results suggest that recruiters were the main source of information about the existence of the bonuses for high quality Army applicants.

Respondents were asked whether they recalled broadcast or printed advertising promoting the Army bonus programs. High quality Army applicants' answers are summarized in Table 2.1, according to their test program cells.[1] Table 2.1 suggests that broadcast and print media reached approximately equal numbers of high quality Army applicants, with the former medium producing slightly greater recall on average. Considering all the media, reported advertising awareness rates were 30 to 35 percent. These rates are not especially surprising, given the limited effort to advertise the programs. Importantly, the advertising awareness rates are statistically equivalent across the test cells (chi-square = 0.1, df = 2, ns).

Table 2.1

AWARENESS OF ADVERTISING PROMOTING ENLISTMENT BONUSES
(Percentage of high quality Army applicants)

	Test Cell		
Type of Media	A	B	C
Broadcast media	19	18	21
Print media	18	16	16
All media	34	30	35
(N)	(658)	(378)	(329)

[1]Broadcast media include radio and television; print media include magazines and newspapers. The "all media" category includes these four sources and materials received in the mail.

AWARENESS OF BONUS PROGRAMS' SPECIFIC FEATURES

Table 2.2 presents awareness levels across the three test cells for some of the bonus programs' specific features. The top row repeats overall awareness levels for the programs from Fig. 2.1, for reference purposes. Immediately below are shown awareness levels for two specific features of the bonus program—that only some jobs qualify for the program and that one must wait to receive the bonus after signing an enlistment contract. Note that most of the respondents aware of the programs were also aware of the specific features. For example, in the A cell, where 68 percent were aware of the program, 57 percent were aware that only some jobs qualify for the program, and 55 percent were aware that one had to wait to receive the enlistment bonus. In other words, among cell A respondents aware of the bonus program, approximately 84 percent (i.e., 57 percent/68 percent) were aware of job qualification restrictions and about 81 percent (i.e., 55 percent/68 percent) were aware of the time delay in receiving the bonus. Further, knowledge of these features was uniform among the three test cells (for "only some jobs qualify," chi-square = 1.6, df = 2, ns; for "must wait to receive bonus," chi-square = 0.1, df = 2, ns).

The bottom panel of Table 2.2 shows awareness levels pertaining to the cash value of the bonuses. About two-thirds of those aware of the

Table 2.2

KNOWLEDGE OF BONUS PROGRAMS' SPECIFIC FEATURES
(Percentage of high quality army applicants)

	Bonus Test Cell[a]		
Program Feature	A	B	C
Aware of bonus program	68	64	69
only some jobs qualify	57	54	59
must wait to receive bonus	55	55	56
Value of Largest Bonus			
Less than $4000	13	11	12
$4000-$5999	42	7	7
$6000 or more	7	42	46
Not sure	6	4	4
Total	68	64	69
(N)	(658)	(378)	(329)

[a]A cell offers $5000 bonus for 4-year enlistment; B cell offers $8000 for 4-year enlistment; C cell offers $8000 for 4-year enlistment or $4000 for 3-year enlistment.

program in a particular cell were also aware of the approximate dollar value of the (largest) bonus paid in that cell. For example, in the A cell, where 68 percent were aware of the program, 42 percent knew that the bonus paid approximately $5000. (Note the expected shifts to larger dollar values for the B and C cells, which paid $8000.) Importantly, knowledge of the correct dollar value was uniform across the test cells (chi-square = 0.4, df = 2, ns).

SUMMARY

The results in the 1983 Applicant Survey concerning the implementation of the Enlistment Bonus Test are reassuring. They indicate a reasonable level of awareness of the test programs among high-quality Army applicants, and suggest that the bonus program was emphasized by Army recruiters. Moreover, they suggest that the test was implemented uniformly across the three test cells. Thus, the results support the validity of the bonus test.

III. THE ENLISTMENT DECISION

Nearly one-half of the high quality male applicants for the active duty services fail to enlist. This nonenlistment rate seems surprisingly high, given the apparent interest of the applicants in military service and their eligibility to enlist. Why is this rate so high, and can it be reduced? Could we really recruit nearly twice as many high quality enlistees from persons who are already known to recruiters and who have already completed the written test? The first step in answering these questions is to improve our understanding of high quality applicants' enlistment decisions.

The process of enlistment is a multistep sequence rather than a discrete event. Before individuals desiring to serve in the active duty military can sign an enlistment contract, they must interact with a recruiter, take the ASVAB, undergo a physical examination, and discuss occupational specialties and training programs with a military job counselor (Berryman et al., 1983). Typically, the process involves several visits to distinct locations—going to a recruiting station; taking the ASVAB at a MEPS or mobile testing site; and, at a later date, completing the physical examination and job counselor interviews at a MEPS. In addressing the issue of why so many high quality applicants fail to enlist, it is important to determine the continuation rates through the several stages of the enlistment process. Where do most of the losses occur—late or early in the enlistment process? For example, if most of the applicants were lost at the physical examination stage, this would suggest that a particular policy variable (i.e., physical enlistment standards) accounted for the low enlistment rate. If most of the losses occurred at the last stage, talking to a military job counselor, this would suggest that restrictions on the jobs and training seats available might account for the low enlistment rate. In contrast, losses early in the enlistment process, that is, between taking the written test and the physical examination, suggest that the individual characteristics of the applicants play the major role in accounting for the low enlistment rate.

There is little research on the extent individual factors play in leading some applicants to enlist and others not to do so. Past analyses of enlistment behavior have used samples drawn from the general youth population, not from the pool of applicants, aiming to distinguish enlistees from those who do not enter military service (e.g., Hosek and Peterson, 1985; Orvis and Gahart, 1985; Mare, Winship, and

Kubitschek, 1984). This vein of research has identified a variety of factors that lead young men to enter the military. Some of the important variables are age, race, mental aptitude, educational achievements and aspirations, employment status and expectations, and the opinions of parents, teachers, and friends. However, it is important to bear in mind that applying for active duty military service is a relatively uncommon behavior. In recent years, less than 20 percent of young men have initiated the application process by taking the production ASVAB, and less than one-half of them eventually enlisted (Orvis and Gahart, 1985). The relatively low rate of application to the military raises the possibility that the factors identified by previous research are associated primarily with taking the ASVAB, rather than the postapplication decisions of potential enlistees. The 1983 Applicant Survey allows us to directly examine which factors influence the postapplication phase of the enlistment decision process. Most of this section will be devoted to that analysis.

The analysis of postapplication enlistment decisions was made possible by combining the survey results with enlistment information contained in Military Enlistment Processing Command (MEPCOM) records. A follow-up examination of these records for all survey respondents was conducted at the end of April 1984. The follow-up enabled us to determine the enlistment status of all sample members one year after they took the written test. Enlistment results were analyzed separately for high aptitude high school seniors and high aptitude high school graduates, the groups the services are most interested in recruiting. Seniors are at a natural decision point involving a choice between college, civilian employment, or military service; in contrast, graduates have passed this point without enlisting and have had the opportunity to begin college or enter the labor force. Thus, they differ in fundamental ways from high aptitude seniors. This section will begin by examining the continuation rates of our high aptitude high school dropouts—orseniors and graduates. Results for low quality applicants—high school dropouts or those testing low aptitude—are presented in App. C.

ENLISTMENT STATUS

Figure 3.1 shows the percentage of the high aptitude high school senior and graduate samples at each step in the enlistment process as of 30 April 1984, about one year after taking the ASVAB examination. Less than 1 percent of the high aptitude applicants failed to meet the written test score criteria for enlistment in the service for which they

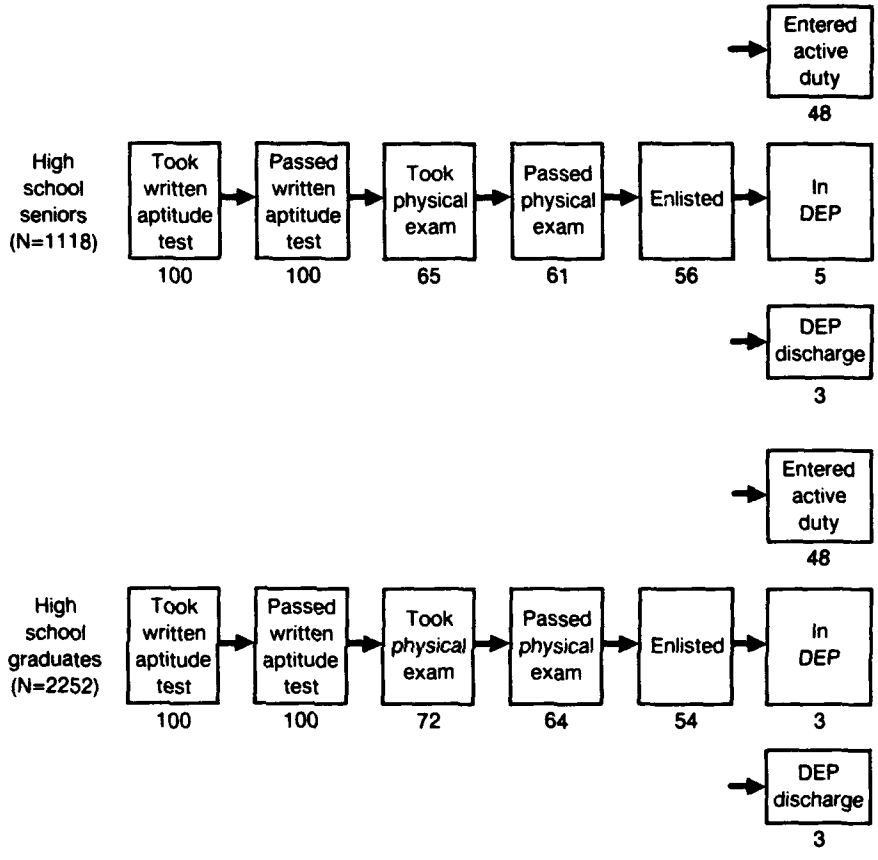
tested.[1] The largest break in the enlistment process came between the written and physical exams. For both groups, between one-quarter and one-third of the applicants who had taken the ASVAB and passed the written standards did not continue on to take the physical exam—some 60 to 80 percent of the nonenlistees. It is important to note that these applicants chose not to enlist—they were not disqualified from military service.

This finding is consistent with prior research and with information we obtained during our interviews of military job counselors and Defense Manpower Data Center personnel. They indicated that most persons who dropped out of the enlistment process did so after taking the written test. (See, for example, Berryman et al., 1983.) In contrast, the loss rate at each successive stage in the enlistment process was only about 10 to 15 percent of the progressively smaller pool of remaining applicants. Post physical examination losses were greater among graduates than seniors, whereas a higher percentage of seniors was lost between the written and physical examinations. In total, 56 percent of the high aptitude high school seniors and 54 percent of the high aptitude graduate applicants enlisted within one year of taking the ASVAB. Nearly all of these enlistees had entered active duty by April 1984. Overall, the pattern of losses clearly suggests that individual factors play an important, if not central, role in determining which applicants enlist, and it underscores the importance of identifying these factors and obtaining a better understanding of the postapplication enlistment decision process.

PREDICTORS OF THE ENLISTMENT DECISION

To analyze the enlistment decision given application, we conducted a logistic regression analysis, simultaneously entering a variety of variables shown by previous research to affect the enlistment decisions of young men (e.g., Hosek and Peterson, 1985; Orvis and Gahart, 1985). These factors were derived from studies on the national youth population and from exploratory analyses of the 1981 Applicant Survey results. In broad terms, the variables concern background characteristics such as AFQT and family income; job-related factors such as employment history and current job status; school status and plans, such as desire or plans for further education and ability to finance that education; discussions the applicant had about enlisting with other people (for example, parents, siblings, and friends), as well as the favorability of these individuals toward the applicant's enlisting; and

[1]An applicant can fail the minimum score criterion for a particular written test even though he scores at or above the 50th percentile on the AFQT.



NOTE: The figure reflects the furthest stage in the active duty enlistment process reached by the applicants as of 30 April 1984, one year after taking the written test. Results are shown separately for high aptitude seniors (AFQT score at the 50th percentile or above, high school seniors in April 1983) and high aptitude high school graduates. The "Passed physical exam" group excludes applicants whose exams resulted in permanent or remedial failures; those taking physicals are persons processed for active duty services.

Fig. 3.1—Enlistment status of high quality applicant sample

military contacts and interests, including service tested for, number of services contacted, interest in military benefits, and perceived starting pay.

Analysis for High Aptitude High School Seniors

The results of the analysis for high aptitude seniors are shown in Table 3.1. (Variable means and standard deviations and the standard deviations and covariances for the regression coefficients are presented in App. C.) As noted in the preceding section, most of the high quality applicants who failed to enlist were lost between the written and physical examinations. Thus, it appears they chose not to enlist, rather than dropping out subsequently due to physical eligibility or job restriction problems. Do background factors such as those in the regression analysis help to explain the enlistment decisions of high quality applicants? The results clearly indicate that the variables provide a great deal of explanatory power. A broad spectrum of demographic, economic, education, and military factors appear to distinguish high aptitude high school senior applicants who are likely to enlist from those who are not.[2]

Demographic characteristics. High aptitude high school seniors from lower income families were more likely to enlist than their counterparts from families with higher average incomes. Family size, entered in part to control for family income, was not significant in its own right. AFQT and race also were not significant predictors of enlistment. Given their significance in predicting which high aptitude seniors in the national population enlist, the results suggest that they are more important in determining which seniors apply than in determining which applicants enlist.

Economic opportunities. Recent involvement in the civilian labor force reduced the likelihood of enlistment among high aptitude senior applicants. Those who had worked during the year before they took the ASVAB were significantly less likely to enlist than those who had not. Among those who had worked but were unemployed in March 1983, about one month before testing, the negative impact of their employment on enlistment decreased as the number of months since they last worked increased. There were no additional significant effects for having a job in March 1983, either full- or part-time, as compared to being out of the labor force. However, unemployed seniors actively seeking jobs in the civilian sector were less likely to enlist than those not looking for civilian jobs.

Education status/plans. High aptitude high school seniors who wanted to attend college were less likely to enlist than applicants not

[2]Keep in mind that these results are for individuals who have already begun the process of enlisting in the military. Thus, some of the factors—such as discussions the applicant had about enlisting—may reflect the applicant's interest in military service rather than explaining how that interest arose. Nonetheless, such factors are significant predictors of the applicant's probability of enlisting.

Table 3.1

REGRESSION ANALYSIS OF ENLISTMENT DECISION FOR HIGH APTITUDE HIGH SCHOOL SENIOR APPLICANTS[a]

Factor[b]	$\beta P(1-P)$[c]	P-Level[d]
Demographic characteristics		
Race (vs. white, non-Hispanic)[e]		
Black	.052	ns
Hispanic	.055	ns
AFQT percentile	.000	ns
Family income 1982 ($ thousand)	−.004	.009
Number of siblings	−.006	ns
Economic opportunities		
Worked in past year	−.143	.026
Months since worked	.019	.035
Job status in March 1983 (vs. out of labor force)[f]		
Full-time job	−.116	ns
Part-time job	−.020	ns
Looking for work	−.125	.002
Education status/plans		
Wants to attend college	−.154	.001
Annual assistance needed for college ($ thousand)[g]	.037	.012
Discussions about enlisting		
Discussed enlisting with parents	.058	ns
Discussed enlisting with siblings	155	.018
Discussed enlisting with teachers	.098	.075
Parents favorable toward enlisting[h]	.079	.001
Siblings favorable toward enlisting[h]	.067	.001
Teachers favorable toward enlisting[h]	.040	.069
Military Contacts and Perceptions[i]		
Service Tested For (vs. Army)		
Marine Corps	.222	.001
Navy	−.027	ns
Air Force	.105	.025
Number of services contacted	.077	.001

Table 3.1—continued

Factor[b]	$\beta P(1-P)$[c]	P-Level[d]
Perceived monthly enlisted pay after job training ($ hundred)	.036	.010
Discussed post-service educational benefit program with recruiter	.076	.046

[a]Logit model predicting a binary dependent variable (enlisted as of 30 April 1984 vs. did not enlist). Independent variables are binary variables except as noted. Base N = 1118; R^2 = .168 (linear); intercept = 1.078, p = .078. See App. B for regression coefficients, means, and standard deviations.

[b]Model includes the following additional control variables (P(1 – P), P-level): family income unknown (.118, .092); uncertain of annual assistance needed to attend college (.091, ns); temporary, remedial, or permanent failure on physical examination (–.488, .001); saw second recruiter because did not qualify for first choice service (–.240, .040); and uncertain of monthly enlisted pay (.115, ns).

[c]The change in enlistment rate associated with a change of one unit in the indicated factor, approximated by multiplying the coefficient for the factor by P(1 – P), where P is the mean enlistment rate for the regression sample (.569).

[d]From chi-square test; ns = not significant, i.e., p > .10.

[e]Includes small percentage of Asians and Native Americans.

[f]Set to 0 if employed in March 1983 or did not work in past year.

[g]Among those wanting to attend college.

[h]Uses five-point favorability scale: very unfavorable to very favorable. Teachers include counselors and coaches.

[i]Variables representing Enlistment Bonus Test cell in earlier models were dropped due to insignificance. Variables indicating discussions with recruiters about enlistment bonuses and job training were dropped for similar reasons.

wanting to attend college. However, among those planning college, the likelihood of the applicant's enlisting increased as his need for money to realize those aspirations increased.

Discussions about enlisting. Respondents who reported that their parents or siblings were favorable toward their enlisting were more likely to enlist than their counterparts. The effect for favorability among teachers and coaches was marginally significant. Additional effects were found for simply having discussed the possibility of enlisting with siblings or (marginally) teachers, regardless of their favorability: Applicants who discussed enlisting were more likely to enlist than those who did not. There was no comparable effect for discussions with parents, because nearly all the high school senior applicants discussed the possibility of enlisting with them. In the national male youth population, where there is a much lower discussion rate, youths who have discussed enlisting with their parents are known to be significantly more likely to enlist than those who have not (Orvis and Gahart, 1985).

Military contacts and interests. High aptitude high school seniors who tested for the Marine Corps or Air Force were more likely to enlist than those testing for the Army. The Army and Navy results did not differ significantly. Applicants who talked to recruiters from more than one service were more likely to enlist than those contacting only one service, provided they had not contacted additional services because they failed to qualify for their first choice. Contacting more than one service may indicate a particularly strong desire to join the military. As might be expected, the likelihood of enlistment among high aptitude seniors increased with the perceived value of enlisted starting pay. Finally, those who discussed the availability of postservice educational benefits with recruiters were more likely to enlist.

These results indicate that civilian job status, social support for enlisting, and college plans and finances have significant effects on high aptitude senior applicants' enlistment decisions, as other research has demonstrated for the national youth population (e.g., Hosek and Peterson, 1985). Thus, even after application, the military services appear to compete with the civilian labor market and with college programs. In addition to helping to focus recruiting efforts by pinpointing individuals who are more or less likely to enlist, these results suggest that advertising or messages from recruiters directed at the job stability, training, educational, and college financing opportunities provided by the military could be effective in encouraging enlistment among high aptitude senior applicants. Moreover, the importance of social support variables suggests that similar messages directed at family members and teachers might produce beneficial results.

One way to evaluate the practical importance of these findings is to assess the degree to which the enlistment regression model successfully differentiates applicants who are more likely to enlist from those less likely to do so. Despite the statistical significance of the variables included in the equation, the model would have little practical utility if the enlistment rate of the applicants predicted to be most likely to enlist was similar to the enlistment rate of those predicted to be least likely to enlist. To examine this issue, the predicted enlistment probability was computed for each high aptitude senior applicant, by determining the inner product of the regression coefficients and his scores on the explanatory variables in Table 3.1. The predicted enlistment probabilities were then ordered over all high aptitude seniors, from lowest to highest, and the applicants were divided into five groups based on their predicted chances of enlisting: the least likely to enlist, i.e., the lowest 20 percent; percentiles 21–40; 41–60; 61–80; and percentiles 81–100, the most likely to enlist.

Table 3.2 shows the mean predicted enlistment probability and actual (observed) enlistment rate for each one-fifth of the distribution of applicants.[3] The predicted and actual numbers correspond closely. There is a wide variation in actual enlistment rates, from 25 percent among the applicants predicted to be least likely to enlist to above 80 percent among the applicants predicted to be most likely to enlist. Thus, an individual in the top one-fifth of the predicted enlistment probability distribution is more than three times as likely to actually enlist as an applicant in the bottom fifth. The dispersion of enlistment rates based on the characteristics in the regression model is quite large, particularly given the selective and homogeneous nature of high aptitude senior applicants. All of these individuals have expressed interest in enlisting by virtue of taking the written test and, with few exceptions, are eligible to do so.

The regression results presented in Table 3.1 can be used to examine the simultaneous influence of numerous variables on enlistment among high aptitude high school seniors who have taken the written test.[4] Table 3.3 shows the effects of selected job status variables and college plans on the predicted enlistment rate. In the upper panel, we see the predicted effects of recent job history on enlistment. For example, high

Table 3.2

VARIATION IN ACTUAL ENLISTMENT RATE BY PREDICTED ENLISTMENT PROBABILITY FOR HIGH APTITUDE HIGH SCHOOL SENIOR APPLICANTS[a]

Position in Distribution of Predicted Enlistment Probabilities	Mean Predicted Enlistment Probability	Actual Enlistment Rate
Percentiles 1- 20	.29	.25
Percentiles 21- 40	.47	.52
Percentiles 41- 60	.60	.60
Percentiles 61- 80	.71	.73
Percentiles 81-100	.84	.81

[a]Results are for applicants who qualified to enlist (i.e., did not fail the physical examination).

[3]The enlistment rate provided for each one-fifth of the distribution in Table 3.2 is the overall enlistment rate among the individuals whose predicted enlistment probabilities fall within the appropriate percentile range.

[4]The change in the enlistment rate associated with a change of one unit in the indicated factor is approximated by $\beta P(1 - P)$, where β is the regression coefficient and P is the mean enlistment rate.

Table 3.3

EFFECTS OF SELECTED JOB STATUS VARIABLES AND COLLEGE PLANS ON ENLISTMENT RATE OF HIGH APTITUDE HIGH SCHOOL SENIOR APPLICANTS

Variable	Change in Predicted Enlistment Rate
Recent job status[a]	
Has full-time job	−.12
One month since job, looking	−.11
Six months since job, looking	−.01
Six months since job, not looking	.11
College plans[b]	
Wants to attend college and needs no money	−.15
Wants to attend college and needs $1000 annually	−.12
Wants to attend college and needs $3500 annually	−.02

[a]Comparisons are with applicants working in past year who drop out of civilian labor force shortly before testing.
[b]Comparisons are with applicants not wanting to attend college.

aptitude high school senior applicants who had full-time jobs shortly before they took the written test had an expected enlistment rate 12 percentage points lower than seniors who were out of the civilian labor force shortly before testing (but who were equivalent on the other predictor variables in Table 3.3, $\beta P(1 - P) = -.116$). Among applicants who had worked in the past year but were out of work shortly before taking the written test, the likelihood of enlistment depended on how long they had been out of work and whether they were still looking for a job. For example, high aptitude seniors who had been out of work for only one month and were looking for employment in the civilian sector had an expected enlistment rate 11 percentage points lower than their counterparts who dropped out of the labor force ($\Sigma\beta P(1 - P) = .019 - .125 = -.106$). Thus, they were about as unlikely to enlist as those who had full-time jobs. In contrast, applicants looking for jobs who had been out of work for six months showed no decrement in enlistment compared to those recently dropping out of the labor force ($\Sigma\beta P(1 - P) = 6 \times .019 - .125 = -.011$). Finally, comparing those who had been out of work for six months and were still looking for jobs in the civilian sector with those out of work for six months and no longer looking for jobs, we note that the decrease in enlistments due simply to looking for work was 12 percentage points ($\Sigma\beta P(1 - P) = 6 \times .019 = .114$).

The lower panel of the table illustrates the joint effects of wanting to attend college and of financial need to realize this aspiration. For example, high aptitude senior applicants who wanted to attend college and believed they could cover all their educational and living expenses had an enlistment rate 15 percentage points lower than those not wanting to attend college. However, the negative impact on enlistment associated with wanting to attend college was substantially reduced by the need for financial assistance. Among those wanting to attend college but believing they needed at least $1000 of additional funding annually to cover their expenses, the enlistment rate was only 12 percentage points lower than among those not wanting to attend college. Finally, among those wanting to attend college who believed they needed large amounts of additional funding to cover their expenses—e.g., $3500 or more annually—there was virtually no negative effect of college plans on the enlistment rate. In short, high aptitude senior applicants who want to attend college are less likely to join the military. However, among prospective college attendees, the need for financial assistance significantly increases the probability of enlistment.

Analysis for *High* Aptitude High School Graduates

Table 3.4 presents the results of the logistic regression analysis for applicants who were high aptitude high school graduates with diplomas. (Variable means and standard deviations and the standard deviations and covariances for the coefficients are provided in App. C.) The variables included in the equation for high school graduates were generally similar to those in the high school senior model, except that age was added (in contrast to the seniors, not all of the graduates were in the same age range) and family income was dropped (most of the graduates were employed and half worked full-time).[5] Also, for graduates, we could examine the effect of college enrollment on enlistment. Overall, the effects resemble those found for high aptitude seniors. However, as one might expect, there were additional effects of civilian job status.

Demographic characteristics. Younger graduates were more likely to enlist than their older counterparts. This result is consistent with work reported for nonapplicant samples (e.g., Orvis and Gahart,

[5]Preliminary analyses indicated that family income was not a significant enlistment predictor, controlling for the other variables in the model. On a related note, preliminary analyses indicated that discussions about enlisting with parents were less predictive of enlistment behavior among graduates than seniors, whereas discussions with friends were more predictive. As a result, each was entered only in the respective regression.

Table 3.4

REGRESSION ANALYSIS OF ENLISTMENT DECISION FOR HIGH APTITUDE HIGH SCHOOL GRADUATE APPLICANTS[a]

Factor[b]	$\beta P(1-P)$[c]	P-Level[d]
Demographic characteristics		
Age (years)	−.019	.001
Race (vs. white, non-Hispanic)[e]		
Black	.124	.004
Hispanic	−.014	ns
AFQT percentile	.001	ns
Number of siblings	−.004	ns
Economic opportunities		
Job Status in March 1983 (vs. out of labor force)[f]		
Full-time job	−.168	.001
Part-time job	−.115	.009
Looking for work	−.123	.001
Full-time job, applicant in college	.181	.004
Part-time job, applicant in college	.054	ns
Looking for work, applicant in college	.092	ns
Expected hourly wage, next civilian job ($)	−.018	.002
Satisfaction with current/last job	−.040	.002
Education status/plans		
In college	−.222	.001
Wants to attend (continue) college/ vocational school	−.069	.041
Annual assistance needed for college/vocational school ($ thousand)[g]	.025	.002
Discussions about enlisting		
Discussed enlisting with siblings	.181	.001
Discussed enlisting with friends	.193	.001
Discussed enlisting with teachers	.093	.040
Siblings favorable toward enlisting[h]	.040	.001
Friends favorable toward enlisting[h]	.049	.001
Teachers favorable toward enlisting[h]	.053	.007

Table 3.4—continued

Factor[b]	$\beta P(1-P)$[c]	P-Level[d]
Military contacts and perceptions[i]		
Service tested for (vs. Army)		
Marine Corps	.056	ns
Navy	−.151	.001
Air Force	−.025	ns
Marine Corps, applicant in college	−.215	.015
Navy, applicant in college	.126	.051
Air Force, applicant in college	.016	ns
Number of services contacted	.038	.008
Interested in military job security	.134	.001
Interested in military health/family benefits	.072	.059

[a]Logit model predicting a binary dependent variable (enlisted as of 30 April 1984 vs. did not enlist). Independent variables are binary variables except as noted. Base N = 2252; R^2 = .152 (linear); intercept = 3.007, P = .001. See App. B for regression coefficients, means, and standard deviations.

[b]Model includes the following additional variables (P(1 − P), P-level): uncertain of next civilian wage (−.221, .001); uncertain of annual assistance needed to attend school (.141, .051); failed physical examination (−.602, .001); and saw second recruiter because did not qualify for first choice service (−.174, .001).

[c]The change in enlistment rate associated with a change of one unit in the indicated factor, approximated by multiplying the coefficient for the factor by P(1 − P), where P is the mean enlistment rate for the regression sample (.527).

[d]From chi-square test; ns means not significant, i.e., $p > .10$.

[e]Includes small percentage of Asians and Native Americans.

[f]Four-point scale: dislike very much to like very much.

[g]Among those wanting to attend college/vocational school.

[h]Uses five-point favorability scale: very unfavorable to very favorable. Teachers include counselors and coaches.

[i]Variables representing Enlistment Bonus Test cell in earlier models were dropped due to insignificance.

1985). It probably reflects the fact that older applicants implicitly have made decisions not to enlist for longer periods of time—normally in order to work or attend college—and for that reason are less likely to reverse those decisions, even after testing. Also consistent with results reported elsewhere for nonapplicant men, we found that black applicants were more likely to enlist than others. The effects of AFQT score and number of siblings were not significant.

Economic opportunities. There were several significant effects of civilian employment status. Together, they suggest that applicants with relatively good civilian job opportunities were less likely to enlist than those with poorer civilian opportunities. This finding is noteworthy in implying that there is important variation in the employment opportunities of high school diploma graduates who score

at or above the 50th percentile on the AFQT and, moreover, that competition with the civilian labor market continues beyond the point of application for these individuals. High aptitude graduates who had full-time jobs and were *not in college* were less likely to enlist than those who were out of the labor force and not attending college. Full-time employment did not reduce enlistments among college attendees, however (as indicated by the significant college interaction term). There was a negative effect for part-time employment; high aptitude graduates with part-time jobs were less likely to enlist than their counterparts out of the labor force, whether or not they were attending college. Compared to those out of the labor force, applicants who were unemployed but still looking for work in the civilian sector also were less likely to enlist. Although the interaction terms were not significant, the effect of part-time employment or looking for work appears to be less pronounced among college attendees. We note that the causal relationships implied by these effects are not totally clear since, for some individuals, being out of the labor force (unemployed and not looking for work) may reflect a strong intention to serve in the military. Nonetheless, the results clearly indicate that high aptitude graduate applicants in the civilian labor market are significantly less likely to enlist.

Perceived civilian wage opportunities also affected enlistments. High aptitude graduates with worse perceived opportunities were more likely to enlist than those believing they could earn higher wages. Feelings about current or recent employment affected the enlistment rate as well. High aptitude graduates who disliked their current or last job were more likely to enlist than those expressing greater satisfaction with their civilian employment.

Education status/plans. There was an overall negative effect of college enrollment on enlistment. High aptitude graduates who were in college were significantly less likely to enlist than those not attending college, and there was a corresponding effect for those wanting to attend college or vocational school. However, the magnitude of the effect depended on one's financial situation. Among those wanting to attend (or continue) school, applicants who needed financial assistance were more likely to enlist than their counterparts who were more financially self-sufficient.

Discussions about enlisting. High aptitude graduates who reported that their siblings, friends, or teachers (or counselors) were favorable toward their enlisting were more likely to enlist than their counterparts. Enlistments were also greater among applicants who had discussed the possibility of enlisting with these individuals, regardless of their feelings about the applicants' enlisting.

Military contacts and interests. High aptitude graduates who tested for the Navy were less likely to enlist than applicants testing for the Army, provided they were not in college. The effect was not seen among college attendees. Marine Corps applicants in college were relatively unlikely to enlist: They were marginally less likely to enlist than high aptitude graduates testing for the Army, and were significantly less likely to enlist than nonattendees testing for the Marines. In contrast, applicants who talked to recruiters from more than one service were more likely to enlist than those contacting only one service, provided they had not contacted additional services because they failed to qualify for their first choice. Finally, high aptitude high school graduates interested in joining the military for job security were more likely to enlist than applicants less interested in job security, and those interested in military health/family benefits were marginally more likely to enlist.

As true for seniors, these results suggest that the military competes with civilian job and academic opportunities in attempting to recruit high aptitude high school graduates, even after they take the written examination to qualify for service. One implication of this finding is that advertising or messages from recruiters directed at the job and educational opportunities provided by the military could encourage high aptitude high school graduate applicants to enlist. The significance of social support variables suggests that such messages might also be directed usefully at those around the applicant with whom he is likely to discuss his enlistment decision.

We can evaluate the practical importance of these findings by assessing the degree to which the enlistment regression model successfully differentiates high aptitude graduate applicants more likely to enlist from those less likely to do so. Table 3.5 shows the actual (observed) enlistment rates for the applicants in each one-fifth of the distribution of predicted enlistment probabilities. The applicants' predicted enlistment probabilities were based on their individual characteristics and the results in Table 3.4.[6] As seen earlier for high aptitude senior applicants, there is a wide dispersion of actual enlistment rates according to predicted enlistment probability. The bottom one-fifth of the distribution has an enlistment rate of less than 30 percent; in contrast, the upper fifth has an observed enlistment rate of 80 percent. This difference indicates that the individual characteristics of the graduates play a major role in determining who will enlist even after application.

[6]The enlistment rate pr[illegible]ed for each one-fifth of the distribution in Table 3.5 is the observed rate among the i[illegible]duals whose predicted enlistment probabilities fall within the appropriate percentile r[illegible]e.

Table 3.5

VARIATION IN ACTUAL ENLISTMENT RATE BY PREDICTED ENLISTMENT FOR HIGH APTITUDE HIGH SCHOOL GRADUATE APPLICANTS[a]

Position in Distribution of Predicted Enlistment Probabilities	Mean Predicted Enlistment Probability	Actual Enlistment Rate
Percentiles -20	.28	.29
Percentiles 21- 40	.45	.43
Percentiles 41- 60	.56	.55
Percentiles 61- 80	.66	.67
Percentiles 81-100	.79	.80

[a]Results are for applicants who qualified to enlist (i.e., did not fail the physical examination).

Table 3.6 shows the predicted effects of selected job and financial status variables on enlistment among high aptitude high school graduate applicants. The upper panel illustrates the effect of recent job status on enlistment among applicants not planning college. For example, applicants who had full-time jobs had an expected enlistment rate 17 percentage points lower than their counterparts who were out of the civilian labor force. We see similar negative effects for part-time employment and for being unemployed but looking for work in the civilian sector, both associated with 12 percentage point decreases in the enlistment rate. Thus, there is a relatively large negative effect of current employment or job search activity in the civilian sector. The three variables' effects are of similar magnitudes, suggesting that, in terms of the likelihood of enlisting, the main distinction for high aptitude graduates is whether the applicant is still in the civilian labor market.

The bottom panel shows the effect of college enrollment on enlistment among the high aptitude graduate applicants. Overall, there is a large negative effect of college attendance. However, the magnitude of the effect varies considerably according to job status and the applicant's ability to fund continued education. At one extreme are applicants who appear relatively self-sufficient. For example, among applicants who were in college, wanted to continue, and had part-time jobs, the predicted enlistment rate was 34 percentage points lower than among those not planning college and out of the labor force. Those who were in college and had full-time jobs were also less likely to

Table 3.6

EFFECTS OF SELECTED JOB STATUS AND COLLEGE ENROLLMENT VARIABLES ON ENLISTMENT RATE OF HIGH APTITUDE HIGH SCHOOL GRADUATE APPLICANTS

Factor	Change in predicted Enlistment Rate[a]
Recent Job Status For Graduates Not Planning College	
Has full-time job	−.17
Has part-time job	−.12
Looking for job	−.12
Job and Financial Status of College Enrollees	
In college, has part-time job	−.34
In college, has full-time job	−.27
In college, has full-time job, needs $3,500 annually to continue	−.18

[a]Comparisons are with applicants not planning college who are not in the civilian labor force shortly before testing.

enlist, but not to the extent of those with part-time jobs. This may reflect the possibility that college students with full-time jobs are less committed students or it could reflect the difficulty of holding down a full-time job while attending college. Finally, at the other extreme, among students who had full-time jobs but believed nonetheless that they needed substantial amounts of additional funding to continue their education, the negative effect of college attendance on enlistment was reduced even further. For example, college attendees with full-time jobs who thought they needed another $3500 annually to continue their schooling were predicted to be 18 percentage points less likely to enlist than their counterparts who were not planning school and out of the labor force. Thus, the negative effect on enlistment associated with college attendance was only half as great for these applicants as for college attendees making ends meet with only part-time employment.

SUMMARY

The analyses presented in this section demonstrate that even after application the enlistment decision of high quality youth is largely one of individual choice, not one determined by eligibility or policy considerations. Nearly half the applicants do not enlist. Of these, most drop out

before taking the physical examination, the next step in the enlistment process after taking the written test. A variety of demographic and background factors have important effects on the enlistment decisions of these applicants. Specifically, the military appears to compete with civilian employment and educational opportunities even after the application stage of the enlistment process. High aptitude high school senior applicants are more likely to enlist if they are from relatively poor families, have recently endured a period of unemployment, do not plan to attend college or do not have the financial resources to do so, or are encouraged to enlist by parents and siblings, among other factors. High aptitude high school graduate applicants are more likely to enlist if, for example, they are young, black, not in college or having a difficult time meeting the financial requirements of college, are dissatisfied with or not well paid by their current jobs, or are interested in the job security provided by military service.

IV. EVALUATION OF ENLISTMENT INTENTION RESPONSES TO HYPOTHETICAL ENLISTMENT OPTIONS

A considerable amount of time and money is spent designing and carrying out field tests of potential enlistment options—such as the Enlistment Bonus Test—to ensure they will evaluate the best options available and that they will reveal differences in the effects of particular options with a reasonable degree of statistical precision. An important objective of the current research was to combine information from the 1983 Applicant Survey with other databases, in order to: (1) develop better methods for interpreting responses to survey questions about intentions to enlist under hypothetical options and then (2) evaluate the potential usefulness of such survey analyses as an adjunct to field tests. In particular, we were interested in whether the survey approach could provide reliable estimates of the effects of certain kinds of options relative to others, for example, enlistment bonuses versus educational benefits or larger-value options versus smaller ones. If so, such information could help us choose among the options available for testing, to determine which options might provide the best results for available funds. In addition, we were interested in ascertaining the similarity of the *enlistment rate increase* predicted for specific options from the survey approach with the actual increase obtained in field tests of those options. If survey results can provide an early indication of the approximate size of options' effects, the results could potentially save time and money in designing and carrying out field tests. Moreover, survey results could be used in conjunction with such tests to evaluate the effects of a broader spectrum of options than could feasibly be evaluated directly in the field.

This section describes two techniques for estimating the effect of implementing potential enlistment options from the enlistment intentions expressed by survey respondents. As will be discussed shortly, the two estimation methods differ in the degree to which they treat as equivalent the stated intentions of different individuals. For the reasons detailed below, the methods were developed and evaluated using three survey databases: (1) the 1983 Applicant Survey, (2) the 1981 Applicant Survey, and (3) the 1981 Grey Advertising National Survey. The section begins by discussing the meaning of intention information; describes next the databases used in the analysis; describes the two estimation techniques; discusses the results and relative merits of the

two techniques for comparing the effects of alternative options; and concludes by comparing the enlistment rate changes estimated for incentive programs from survey data with the changes obtained in field tests of those options.

MEANING OF INTENTION INFORMATION: OVERVIEW

An intention can be conceptualized as a behavioral forecast, that is, as an individual's prediction of his own behavior at some point in the future (Ajzen and Fishbein, 1980). This view assumes that an intention represents an individual's attempt to summarize the influences of a number of factors that may affect his behavior. These factors include the opportunities and alternatives available to him, his own preferences, his abilities, the obstacles which must be overcome in order to perform the behavior, the opinions of other people important to him, and any other factors upon which his behavior is contingent. Obviously, the assumptions upon which the intention is based often are not satisfied, and the relationship between intentions and behavior is not a perfect one. In particular, the interests and preferences of individuals may change with the passage of time and individuals may underestimate the influence of situational factors on their behavior (Fiske and Taylor, 1984). Nonetheless, it has been well documented that intentions do predict behaviors as diverse as enlisting, purchasing toothpaste, donating blood, and engaging in family planning (e.g., Davidson and Jaccard, 1975; Fishbein and Ajzen, 1975; Orvis and Gahart, 1985; Pomazal and Jaccard, 1976). Moreover, there is evidence that individuals can estimate the effects of changing conditions on their behavior. For instance, Juster (1964) asked consumers to predict their future buying behavior on the assumption that their income would rise by 10 percent in the next year. Their intentions concerning a hypothetical situation were significantly related to the actual purchases of consumers who experienced the increase.

Research on stated intentions to enlist in the military has concerned both their relationship to subsequent enlistment behavior and their use in anticipating the effects of changing conditions. It has been found that individuals who express an intention to enlist (or reenlist) in the military do enlist (or reenlist) more frequently than those who do not express such intentions (Brunner, 1971; Chow and Polich, 1980; Orvis, 1982). For example, Chow and Polich measured the reenlistment intentions of enlisted personnel within one year of completion of their first tour of duty. They reported that approximately 86 percent of those with a clear intention to reenlist actually did so, whereas less

than 5 percent of those who stated they did not intend to reenlist elected to continue their military careers. Responses to hypothetical options have been analyzed to predict the effect of changes in enlistment (or reenlistment) options. For instance, Hiller (1982) estimated that a 10 percent reenlistment bonus would increase the mean reenlistment intention level of Army personnel by 13 percent. Typical of many such studies, however, he did not translate the intention change into a reenlistment rate change.

ESTIMATION METHODS

The type of analysis undertaken by Hiller can be useful in comparing the merits of alternative types of options. However, it does not provide a meaningful estimate of the net effect of the policy in question: the change in the reenlistment rate. For intention information to be useful beyond making relative comparisons among alternative options, we must understand how to use it to predict the options' effects on the enlistment (or reenlistment) rate and whether such predictions provide reasonable approximations of the true effects of the options. In their analysis of enlistment intentions among nonprior service young men, Orvis and Gahart (1985) found that intentions convey more information about an individual's probability of enlisting than do his background characteristics alone. Importantly, they also found that the effects of background characteristics are not fully incorporated into stated enlistment intentions and, thus, help to explain why some individuals with a given intention enlist while others do not.

The implications of these findings are that (1) enlistment intention information may help to predict the effects of potential options but that (2) individuals expressing similar enlistment intentions in response to the options may not be equally likely to enlist, if their background characteristics differ in important ways. The latter point should be addressed if we are to use responses to survey questions about the likelihood of enlisting under hypothetical options to predict the enlistment rate changes resulting from their implementation. Specifically, methods must be developed to combine both intention and background characteristic information in predicting the options' effects on the enlistment rate. The cost of such a procedure is that it is more difficult to apply and requires more information. The added complexity may not be justified if the policy question concerns the comparative effects of alternative types of options or if, despite the improved methodology, the procedure fails to produce reasonable approximations of field test results. Accordingly, we developed two estimation techniques for evaluation. They differ in whether they treat individuals

with the same stated enlistment intention as being equally likely to enlist. The two methods are summarized below and in Table 4.1.

Simple Method

The first or "simple" method treats all respondents in a given intention category equivalently. That is, it assumes that everyone with a similar stated enlistment intention has an equal likelihood of enlisting. Application of the first method involves three basic steps. First, the actual enlistment rate under the current (or baseline) program is determined for each intention category. Assuming two intention categories—positive intention (definitely or probably will enlist) or negative intention (definitely or probably will not enlist, or don't know if will enlist)—results from a previous study of the parent population are applied or a follow-up of the survey

Table 4.1

SUMMARY OF METHODS USED TO ESTIMATE EFFECTS OF HYPOTHETICAL ENLISTMENT OPTIONS

I.	Simple method: assigns all respondents in a given intention Category an equal probability of enlisting
	Step 1. Determine enlistment rates for enlistment intention categories under baseline program
	Step 2. Measure enlistment intention distribution under hypothetical option
	Step 3. Apply baseline enlistment rates to intention distribution to estimate enlistment rate under hypothetical option
II.	Multivariate method: does not assign all respondents in a given intention category an equal probability of enlisting
	Step 1. Model relationship between stated enlistment intention level under baseline program and respondent background characteristics, to impute intention level
	Step 2. Model enlistment probability under baseline program using imputed intention level and background characteristics
	Step 3. Estimate respondent's enlistment probability under hypothetical option based on his stated intention level under the option and his background characteristics, using the models developed in Steps 1 and 2, aggregate across respondents to determine overall enlistment rate

respondents is conducted to determine what proportion of persons expressing positive and negative intentions actually enlists. The second step is to measure the distribution of enlistment intentions—i.e., the proportions of respondents reporting positive and negative intentions—for the hypothetical option in question. In the third step, the enlistment rates for the positive and negative intention groups (first step) are applied to the distribution of enlistment intentions (second step). This involves multiplying the proportion of persons expressing positive intentions by the proportion of such individuals that enlists and adding the result to the product of the proportion of individuals expressing negative intentions multiplied by the proportion of those individuals that enlists. The sum provides an estimate of the enlistment rate under the given hypothetical option. By comparing this sum with the enlistment rate under the current or baseline program, the effect of the hypothetical option on enlistments can be estimated. The steps in applying this method are illustrated in App. D.

Multivariate Method

The "multivariate" method differs fundamentally from the simple method in that it does not treat all respondents in a given intention category equivalently, that is, it does not assume that all persons with the same stated intention are equally likely to enlist. Instead, it assumes that measured intentions reflect true (i.e., underlying) intentions plus measurement error, that the probability of enlistment is a function of true intention level and background characteristics, and that true enlistment intentions are related to respondents' background characteristics. In other words, the multivariate method assumes that there is imprecision inherent in the relationship between stated intentions and enlistment, and that such imprecision arises because individuals do not accurately take account of the influence of their background characteristics on their probability of enlisting. Thus, demographic and background factors can be used to adjust intention responses to provide more accurate estimates of the likelihood that particular individuals will enlist. The multivariate approach is discussed at length in App. D.

As seen in the lower portion of Table 4.1, the initial step in applying the method is to model the relationship between respondents' stated enlistment intentions under the baseline program and their background characteristics to impute their "true" intention levels. Next, the probability of enlisting under the baseline program is modeled using respondents' imputed intention levels and their background characteristics. In the third step, a respondent's stated intention in response to a

particular hypothetical option is used in conjunction with information on his background characteristics to provide an estimate of his probability of enlisting under the option, as specified in the equations developed in steps 1 and 2. By computing the average predicted enlistment probability under the option across all respondents, and comparing it with the enlistment rate under the baseline (current) program, the effect of the hypothetical option on enlistments can be estimated.

DATABASES

The simple and multivariate analysis methods were developed and evaluated using results from three survey databases. All of the surveys included very similar questions assessing respondents' background characteristics and their enlistment intentions under specific hypothetical options. The use of multiple databases enables us to compare the consistency of intention responses across different survey samples and provides comparisons with actual field test results for specific options. These points are discussed below.

Table 4.2 provides an overview of the databases. The databases include the 1983 Applicant Survey, the 1981 Applicant Survey, and the 1981 Grey Advertising National Survey. The 1983 Applicant Survey provided enlistment intention and background characteristics information for male production ASVAB examinees who tested in April 1983. The second database, the 1981 Applicant Survey, also contained results

Table 4.2

SURVEY DATABASES PROVIDING INFORMATION ON EFFECTS OF HYPOTHETICAL ENLISTMENT OPTIONS

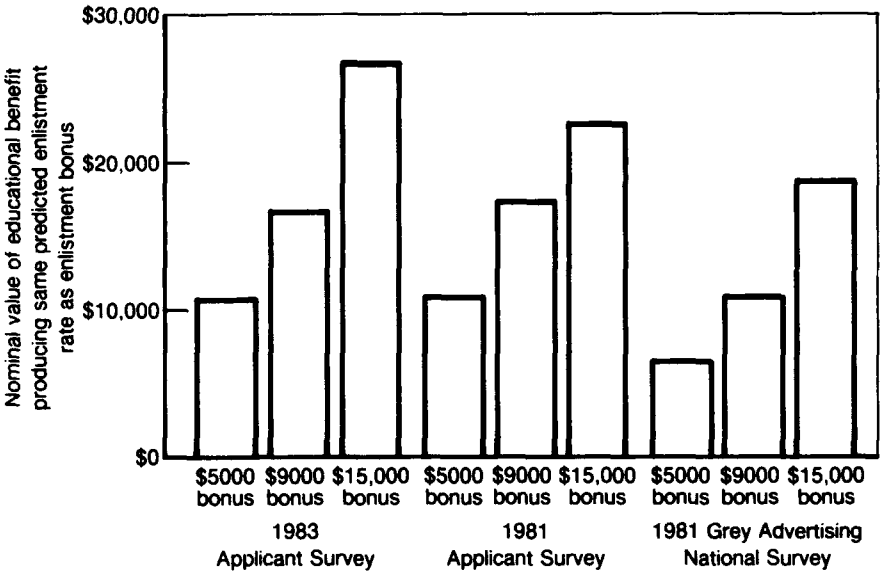
Database, Sample, and Recruiting Environment
1983 Applicant Survey
Male production ASVAB examinees Enlistment Bonus Test in field
1981 Applicant Survey
Male production ASVAB examinees Educational Assistance Test Program in field
1981 Grey Advertising National Survey
Representative sample of males, aged 16–20 years Educational Assistance Test Program in field

of interviews with male production ASVAB examinees; in this instance, they tested in April 1981. In April 1983, the Enlistment Bonus Test programs were available to high quality Army applicants, whereas in April 1981 the Educational Assistance Test Program options were available to high quality applicants for all services (Fernandez, 1982). We evaluated data from both applicant surveys to avoid relying solely on applicants who applied at a time when there was a special emphasis on either educational programs (1981) or enlistment bonus programs (1983). Under such conditions, individuals attracted into the applicant pool might be particularly interested in the special incentive programs offered at that time. Finally, we also analyzed results from the 1981 Grey Advertising National Survey. This survey was conducted in conjunction with the 1981 Applicant Survey, and contained many similar questions. The national survey, however, was administered to a representative sample of nonprior service men, aged 16–20 years. To assess the effect of potential enlistment options on expanding the market—i.e., increasing enlistments—the national survey is the most appropriate of the three databases. Such options seek to expand the pool of applicants as part of increasing enlistments. Although it is informative, intention information from applicant surveys can tell us only about the effects of new options on persons who would apply for service under existing programs. Moreover, a national survey avoids the potential self-selection problems associated with applicant surveys. For these reasons, we will focus primarily on results from the national survey.

COMPARISONS BETWEEN TYPES OF OPTIONS

Consistency Across Databases

As discussed earlier, one application of intention information concerns comparisons of the effects of different types of options, such as large versus small value options or educational benefits versus enlistment bonuses. The key questions concerning such comparisons are whether they produce reasonable results and whether the results are consistent across different survey samples. Figure 4.1 illustrates this type of comparison, using the simple method and applying it to each of the three survey databases. In each survey, respondents were asked about their enlistment intentions in response to various nominal dollar values of cash enlistment bonuses and postservice educational benefits. Based on these results, the figure shows the approximate nominal values (i.e., face values) of educational benefits that produced the same



NOTE: Based on data from higher quality respondents.

Fig. 4.1—Consistency of responses to option types across databases

predicted enlistment rates as the three indicated values of cash enlistment bonuses. The applicant results are based on data from high quality respondents. For comparability, the national results are based on data provided by persons who were identified as higher quality respondents according to the procedure developed by Orvis and Gahart (1985). These persons are high school graduates or high school students who would be expected to score at or above the 50th percentile on the AFQT. Appendix D provides additional details on the analysis.

For each of the survey databases, the bars increase in height as we move to larger enlistment bonuses. This change indicates that larger educational benefits were required to produce the same predicted enlistment rate changes as larger bonuses, as should be expected. The three surveys produce consistent results concerning the effects of benefits relative to bonuses. The data indicate that it took about \$1.50–\$2.00 in nominal educational benefits to produce the same response among applicants as \$1.00 in enlistment bonuses. For

example, in the 1983 Applicant Survey it took just over $10,000 in nominal educational benefits to produce the same response as a $5000 enlistment bonus, a ratio of about 2 to 1. Similarly, it took about $27,000 in nominal educational benefits to produce the same response as a $15,000 enlistment bonus, a ratio of approximately 1.8 to 1. The heights of the bars are similar for the 1981 Applicant Survey, indicating similar ratios. The bars are also similar, but somewhat shorter, for the Grey Advertising National Survey. This suggests that educational benefits do a little better in a national sample, as compared to applicant samples. The result is reasonable, since we would expect many of the persons most interested in attending college to be present in a national sample but not in an applicant population. Among such persons, the appeal of educational benefits as an enlistment incentive would be greater than among those less likely to continue their education. In total, the analysis provides support for the use of intention information in gauging the comparative effects of different types of potential enlistment options.

Effects of Respondent and Option Characteristics

The simple method assigns an equal enlistment probability to everyone in a given intention category, whereas the multivariate method uses background characteristics information to help predict the likelihood of enlistment. Nonetheless, the simple and multivariate methods can produce similar results to the extent that the survey data can be partitioned meaningfully according to respondents' characteristics on important background variables. By (1) partitioning the sample on important background factors and (2) computing a separate baseline enlistment rate for each factor level-intention level combination, the enlistment estimates produced by the simple method are adjusted for the influence of the background factors on enlistment. In the multivariate method, this is accomplished by the application of the intention and enlistment equations. Since it can take account of many dimensions, the multivariate method is the preferred approach. However, the simple method provides satisfactory results when the survey data can be partitioned on the dimensions of interest and when the effect of a hypothetical option on enlistments is relatively consistent across individuals within these dimensions.

Figure 4.2 illustrates this type of analysis to predict the enlistment effects of various dollar values of enlistment bonuses and educational benefits from responses to the 1981 Grey Advertising National Survey. The basic background characteristic distinction in Fig. 4.2 is whether or not the respondent was in high school at the survey point. Respondent quality is not distinguished. The unshaded bars represent results

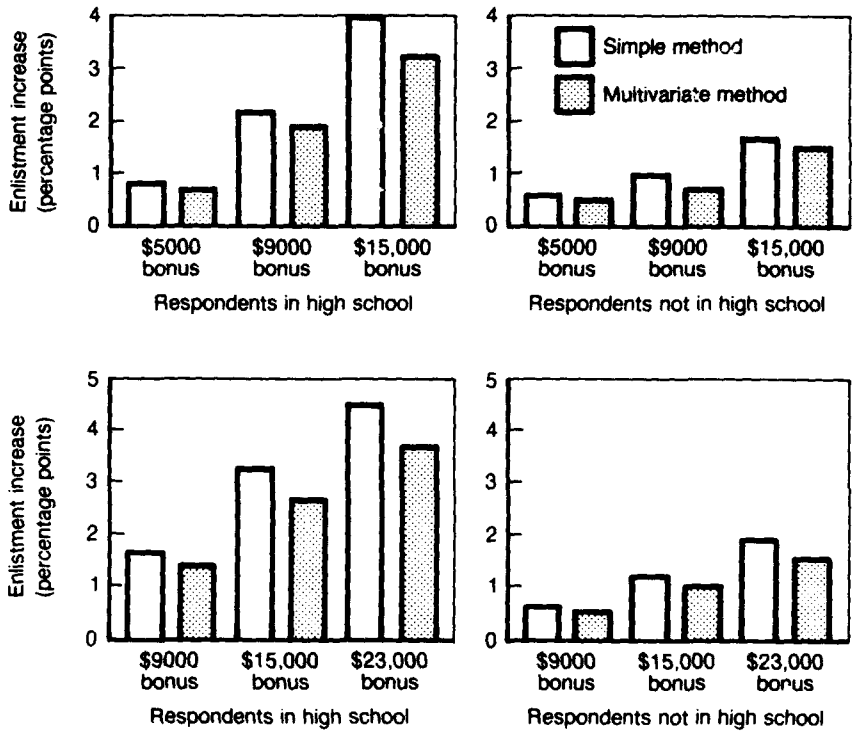


Fig. 4.2—Comparison of results from simple and multivariate prediction methods for basic analysis

based on the simple method; the shaded bars are based on the multivariate method. The findings represented by the shaded and unshaded bars are similar in each of the four graphs. This similarity reflects the comparability of results generated by the two approaches for the high school student and nonstudent groups. The bars are somewhat shorter for the multivariate method than for the simple one, however, particularly for the larger option values. This difference occurs because the multivariate method takes into account the background characteristics of the respondents. It suggests that individuals who express positive intentions only under more generous options are in actuality somewhat less likely to enlist under those options than are individuals who previously expressed positive intentions under less generous options. The simple method cannot detect this effect.

The results in Fig. 4.2 suggest that an analysis evaluating the simultaneous effects of several dimensions might be informative. For example, the bars for respondents in high school are taller than the bars for respondents not in high school, suggesting that the enlistment incentives produce a greater response among high school students. Moreover, the discrepancy in the height of the bars between the high school students and nonstudents appears to increase as the nominal value of the incentive increases. Thus, for example, the bars for persons in high school and not in high school are more similar for a $5000 bonus than for a $15,000 bonus; the bars for a $9000 benefit are more similar than for a $23,000 benefit.

To investigate the effects of option characteristics and show how they vary among different types of respondents, we conducted an analysis of variance (ANOVA) on the changes in enlistment rates predicted for the options by applying the multivariate method to the national survey results.[1] The predicted enlistment effects were evaluated according to whether or not respondents were still in high school. Also, respondents predicted to score at or above the 50th percentile on the AFQT were compared with lower aptitude respondents. The analysis further distinguished the type of enlistment option, benefit versus bonus, and the nominal dollar value of the option. The analysis thus contained two between-subjects factors (school status and aptitude) and two within-subjects factors (option type and option value).

The analysis of variance suggests a number of important differences in the predicted enlistment rate according to respondent and option characteristics, as shown in Table 4.3.[2] In total, the results are consistent with observed behavior in the recruiting market and, therefore,

[1]It is important to understand that the predicted effects of the options are determined primarily by the changes in enlistment intentions expressed by the respondents, rather than the enlistment and intention equations applied in the multivariate method. The dependent variable represents changes in the predicted enlistment rate. Thus, the ANOVA would show no effects whatsoever if enlistment intention responses did not change. If intentions changed uniformly—that is, an equivalent proportion of persons expressing negative intentions changed to positive intentions in response to different options and/or among the high school student and nonstudent groups—there could be limited effects of respondent and option characteristics. Appropriately, the effects would depend on the characteristics of the persons changing intentions in response to each option and on the observed relationship between intentions, respondent background, and enlistment. See App. D.

[2]The ANOVA uses classifying factors that are distinct from the variables in the multivariate method enlistment equations, and, moreover, combines results for the high school student and nonstudent models. The P-levels in the ANOVA should be interpreted with caution nonetheless, since the results are based on predicted rather than actual enlistment effects. Table D.4 presents the mean enlistment changes associated with Table 4.3.

Table 4.3

PREDICTED VARIATIONS IN ENLISTMENT RATES BY RESPONDENT AND OPTION CHARACTERISTICS

Source of Variance	Degrees of Freedom	Mean Square	F-Ratio	P-Level[a]
Respondent aptitude	1	.0000	0.00	ns
Respondent school status	1	.1958	25.63	.001
Respondent aptitude × school status	1	.0008	0.10	ns
Error term	761	.0077		
Option type	1	.0136	8.71	.003
Option type × aptitude	1	.0047	3.01	.083
Option type × school status	1	.0078	5.01	.025
Option type × aptitude × school status	1	.0001	0.09	ns
Error term	761	.0016		
Option nominal dollar value	2	.1201	138.71	.001
Option value × aptitude	2	.0016	1.80	ns
Option value mu school status	2	.0183	21.10	.001
Option value × aptitude × school status	2	.0004	0.48	ns
Error term	1522	.0009		
Option type × option value	2	.0007	1.32	ns
Option type × option value × aptitude	2	.0009	1.77	ns
Option type × option value × school status	2	.0002	0.47	ns
Option type × option value × aptitude × school status	2	.0009	1.75	ns
Error term	1522	.0005		

[a]The ANOVA uses classifying factors that are distinct from the variables in the multivariate method enlistment equations, and, moreover, combines results for the high school student and nonstudent models. The P-levels in the ANOVA should be interpreted with caution nonetheless, since the results are based on predicted rather than actual enlistment effects (N = 765).

afford confidence in the validity of the enlistment intention approach. For example, predicted enlistment increases under the potential options were significantly greater among high school students than among those not in high school, as suggested in the discussion of Fig. 4.2. This difference would be expected, since most persons who eventually enlist do so during or shortly after high school. As one would also expect, larger options produced greater predicted enlistment increases than smaller options.

Several statistically significant interaction effects were also indicated. For example, not only were high school students more

responsive to the prospective options, but, as suggested above, the difference between the predicted enlistment rates for high school students and persons not in high school increased as the nominal value of the incentives increased. Interaction effects were also found concerning respondents' likelihood of enlisting under enlistment bonus options as compared to educational benefit options.[3] In comparison with the response to enlistment bonus options, response to educational benefits was more favorable for high school students than for persons not in high school, and marginally more favorable for high aptitude youths than for low aptitude youths. These results seem reasonable, since we would expect high school students and high aptitude youths to be the individuals most interested in continuing their education.

APPROXIMATION OF FIELD TEST RESULTS

Thus far we have presented evidence suggesting that questions about the likelihood of enlisting under hypothetical options can produce reasonable and consistent results concerning the effects of certain kinds of options relative to others. This makes the survey approach potentially useful in helping us choose among alternative options, to get the best enlistment results for available funds. Another important issue concerns the comparability of the enlistment rate changes predicted for specific options from the survey approach with the changes observed in field tests of the same options. To make such comparisons, we must be able to predict the enlistment rate for the control cell of an experimental program and for at least one test cell.

Using data from the Grey Advertising National Survey, it was possible to predict and compare enlistment rates for the control and Ultra-VEAP Kicker cells of the Educational Assistance Test Program and for the control and $8000 cells of the Enlistment Bonus Test. To predict enlistment rates for the four cells, we used the multivariate estimation method, making certain restrictions as warranted by the features of the test programs. First, because the programs were open only to high quality enlistees, the intention analysis was based on the responses provided by higher quality respondents.[4] Second, because the programs we evaluated were Army programs, the enlistment model used in the estimation predicted enlistment in the Army, rather than enlistment in

[3]The main effect found for option type (i.e., benefit versus bonus) is not readily interpreted, since the nominal dollar values of the enlistment bonus and educational benefit options were not equivalent.

[4]As used here, "higher quality" refers to respondents predicted to score at or above the 50th percentile on the AFQT who were high school graduates or high school students at the survey point.

the military in general. Finally, consistent with the results observed in the Educational Assistance Test Program and the Enlistment Bonus Test, we assumed that enlistment increases would occur only in eligible military occupational specialties (MOS). Thus, we applied a factor in the analyses that took into account the proportion of MOS eligible for the test programs. These procedures are summarized in Table 4.4; they are discussed in detail in App. D.

Table 4.5 shows the enlistment increases predicted for the experimental programs from the survey approach—which relies on responses to enlistment intention and background characteristic questions—and the actual increases observed in the field tests of the programs. The predicted increases compare closely with the observed results. For example, according to the survey approach, the Ultra-VEAP Kicker (UVK) program was predicted to increase enlistments by approximately 8 percent. The actual increase observed in the test was 8.7 percent. Similarly, the predicted enlistment increase for the $8000 cell in the Enlistment Bonus test was just over 2 percent. This compares to an increase of 4.1 percent determined in the analysis of the actual test results (see Polich and Dertouzos, 1986). The Bonus Test analysis controls for changes in recruiting practices under more favorable market conditions that act to mask the full market expansion potential

Table 4.4

SURVEY DATA ANALYSIS PROCEDURES USED TO APPROXIMATE FIELD TEST RESULTS

Programs and Procedures
Cells analyzed
Control and Ultra-VEAP Kicker cells of Educational Assistance Test Program
Control and $8000 cells of Enlistment Bonus Test
Procedures
Use multivariate estimation method
Analyze results for higher quality respondents[a]
Use model of enlistment in Army
Limit enlistment increases to eligible specialties

[a]Respondents predicted to score at or above the 50th percentile on the AFQT who were high school graduates or high school students at the survey point.

Table 4.5

COMPARISON OF ENLISTMENT RATE CHANGES PREDICTED FROM SURVEY APPROACH WITH FIELD TEST RESULTS

	Percentage Increase in Enlistments Compared to Control Cell	
Test Program and Cell	Predicted Increase[a]	Actual Increase
Educational Assistance Test Program, UVK cell	7.9	8.7
Enlistment Bonus Test, $8000 cell	2.1	4.1[b]

[a]N = 765.
[b]Assumes constant recruiting effort and market conditions; observed increase lower.

of the bonuses, statistically removing the effects of such changes on the observed enlistment rate.[5] This type of adjustment is beyond the scope of the current survey approach, which produces approximations based on normal recruiting practices. For this reason, the survey approach can be expected to produce somewhat smaller estimates of the bonuses' effects relative to those reported in the test for more ideal conditions.

Overall, the findings clearly suggest that the application of enlistment intention and demographic information—the "survey method"—can produce reasonable approximations of field test results. Such information, were it available in the development phase, might save a considerable amount of time and money in the design and execution of the tests. Moreover, survey results could be used as a supplemental data source to approximate the effects of a broader spectrum of potential options than feasible to test directly in the field.

[5]The 4.1 percent figure was derived by an analysis that controlled for observed recruiting practices under the actual market conditions elicited by the Enlistment Bonus Test programs. One effect of the improved recruiting market was an apparent reduction in recruiter effort. This reduction in effort masked the full market expansion potential of the bonuses. Also, not all the additional enlistees brought in during the Enlistment Bonus Test period were high quality enlistees; this too acted to reduce the observed enlistment increase for high quality youths below 4.1 percent. The Bonus Test analysis corrected for the effects of such recruiting practices statistically by adjusting the observed enlistment rate upward.

SUMMARY

An important objective of the current research was to combine information from the 1983 Applicant Survey with other databases in order to (1) develop better methods for interpreting changes in stated enlistment intentions in response to hypothetical enlistment options and (2) evaluate the potential usefulness of such survey information as an adjunct to field tests of proposed enlistment incentives. Two techniques for predicting the enlistment effects of potential options from survey data were developed and explored. The first provides a means of making basic comparisons concerning the appeal of alternative types of options, and treats all persons with the same stated enlistment intention as being equally likely to enlist. The second method is more complex; it considers both respondents' stated intentions and background characteristics in predicting their probability of enlisting. The second method can be used to make a more accurate prediction of an individual's likelihood of enlisting under a specific option, in addition to making relative comparisons between alternative types of incentives.

Results from three survey databases were analyzed: the 1983 Applicant Survey; the 1981 Applicant Survey; and 1981 Grey Advertising National Survey. The first two databases provide information on male production ASVAB examinees. Use of both databases controls for potential self-selection problems caused by the fact that different enlistment option programs were offered in the two years. The third database provides information on the national population of nonprior service men, ages 16–20 years. It is the most appropriate database for examining the market expansion potential of the options, which includes increasing the number of applicants as well as the proportion of applicants that enlists.

The usefulness of survey information as an adjunct to field tests of potential enlistment options hinges on two issues: (1) whether survey results can provide reasonable and consistent information about the effect of one type of option as compared with another and (2) whether the magnitudes of enlistment rate changes predicted from a survey approach can closely approximate the actual changes resulting from the implementation of new options. The answer to both questions appears to be "yes." The three surveys provided reasonable and consistent information concerning the comparative effects of different types of options. This suggests that survey data could be used to help select which options to test, in order to obtain the best enlistment results. To address the second question, we used results from the national survey to predict the enlistment rate changes that would result from the implementation of two specific options, and then compared the

predicted changes with the actual changes obtained in field tests of these options. The enlistment rate changes predicted for the Ultra-VEAP Kicker cell of the Educational Assistance Test Program and the $8000 cell of the Enlistment Bonus Test were compared with the actual results obtained for these cells in the respective tests. In both cases, the predicted changes were in close agreement with the observed results. This suggests that survey data can be used to provide an early indication of the approximate size of enlistment rate changes, which could save time and money in designing and carrying out field tests of specific options. Moreover, survey results could be used in conjunction with such tests, to help evaluate the effects of a wider range of options than could feasibly be evaluated directly in the field.

V. CONCLUSIONS

The Enlistment Bonus Test results leave certain important questions about implementation unanswered. For example, to what extent were high quality Army applicants aware of the enlistment bonus programs and to what extent were the bonuses used by recruiters to interest applicants in enlisting? Were the three bonus programs equally implemented? These are key questions in evaluating the test results. Prospective recruits must be aware of the programs if they are to be effective, and awareness of the different test programs must be uniform for comparisons among them to be valid. To address these issues, we interviewed over 6800 nonprior service men who took the written aptitude examination for the military (ASVAB) in April 1983.

The interview was also designed to collect information pertinent to other important issues, including why nearly half the high quality applicants do not enlist. We examined the influence of a variety of economic, academic, and demographic factors on applicants' enlistment decisions. The key question in this analysis was whether such background factors are important in determining who enlists and who does not, even after application. Finally, by combining enlistment intention data from the current survey with comparable results from prior surveys, we developed two methods for using intention data to predict the enlistment response to alternative hypothetical options. The purpose was to evaluate the consistency of survey information concerning the appeal of different types of options and the extent to which predicted enlistment rate changes based on a survey approach approximate the actual changes measured in field tests of specific options. If valid, survey analyses could guide policymakers in choosing which options to test, in designing field tests of those options, and in evaluating a broader spectrum of options than can be tested directly in the field.

The 1983 Applicant Survey results suggest that enlistment bonuses were emphasized and uniformly implemented by Army recruiters. Two-thirds of the high quality Army applicants recalled being told about enlistment bonuses by Army recruiters. This level seems sufficient to support implementation of the Enlistment Bonus Test. Given that only 30 percent of the jobs qualified for the programs, recruiters would not be expected to discuss the bonuses with all applicants. In each test cell, the percentage reporting awareness of the program was nearly identical to the percentage reporting they discussed the program with recruiters; recall of advertising that promoted the program was

substantially lower. Moreover, among those aware of the program, nearly all had discussed it with recruiters, whereas only one-third of those not told about enlistment bonuses by recruiters were aware of the program. These results suggest that recruiters were the main source of information about the existence of the bonuses among high quality Army applicants.

Recruiter discussion rates and bonus awareness levels were uniform across the three test program cells. Awareness of advertising that promoted the bonuses was also uniform across test cells. Most of the high quality Army applicants who were aware of the programs were also aware of the programs' basic features. For example, a high percentage knew that only some jobs qualified for the bonus or that an enlistee had to wait to receive it. About two-thirds of those aware of the bonus (just under half of the total) knew the approximate cash value of the bonus program in their area. Knowledge of the specific features of the programs was uniform across test cells.

Overall, then, the results support the validity of the Enlistment Bonus Test. It should be reiterated that full evaluation of the test's implementation would require that awareness be assessed for the population of all young nonprior service men (i.e., both applicants and persons not applying for military service) particularly in relation to the market expansion effects of the bonuses, as compared to their skill channeling effects. Nonetheless, among those most immediately affected by the test programs (high quality Army applicants who tested and were deciding whether and in what MOS to enlist) the results provide evidence supporting the attribution of differences in enlistments among the three test cells to the differences in their respective bonus programs rather than to differences in what prospective enlistees knew about those programs. Conversely, since two-thirds of the applicants were aware of the programs, an absence of effects cannot be attributed to lack of knowledge about the bonuses.

We conducted a follow-up in April 1984 to determine the enlistment status of our high aptitude high school senior and graduate applicants one year after they took the ASVAB. The largest break in the enlistment process came between the written and physical exams. For both groups, between one-quarter and one-third of the applicants who had taken the ASVAB and passed the written standards did not continue on to take the physical exam. This represents 60 to 80 percent of the nonenlistees. It is important to note that these applicants chose not to enlist—they were not disqualified from military service. In contrast, the loss rate at each successive stage in the enlistment process was only about 10–15 percent of the progressively smaller pool of remaining applicants. Post physical examination losses were greater among

graduates than seniors, whereas a higher percentage of seniors was lost between the written and physical examinations. In total, 56 percent of the high aptitude high school seniors and 54 percent of the high aptitude graduate applicants enlisted within one year of taking the ASVAB. Nearly all of these enlistees had entered active duty by April 1984. Overall, the pattern of losses clearly suggests that individual factors play an important, if not central, role in determining which applicants enlist, and it underscores the importance of identifying these factors and obtaining a better understanding of the post-application enlistment decision process.

Regression analyses of the enlistment decisions of our high quality applicants provided considerable evidence that background factors substantially affect their likelihood of enlisting. Among both high aptitude high school seniors and high aptitude high school graduates, the applicants predicted to be least likely to enlist according to our models—i.e., the lowest one-fifth in the distribution of predicted enlistment probabilities—had an actual enlistment rate of less than 30 percent, whereas those predicted to be most likely to enlist—i.e., the upper fifth—had an enlistment rate of 80 percent. This wide variation is somewhat surprising, given the interest the applicants expressed in enlisting by taking the production ASVAB and the fact that they were almost all eligible to enlist (i.e., they had graduated from high school or were about to and they scored at or above the 50th percentile on the AFQT).

Among high aptitude seniors, applicants from poorer families, who had not worked recently, or who were no longer in the civilian labor force were more likely to enlist. Applicants reporting that their families or teachers/counselors supported their enlisting also were more likely to enlist. In contrast, high aptitude seniors who wanted to attend college were much less likely to enlist than those who did not. The negative effect of college plans on enlistment decreased, however, as the applicant's perceived need for financial assistance to pay for school increased. This suggests that among high aptitude senior applicants planning college, those needing money to attend school can be attracted into military service.

Results for high aptitude high school graduates were similar. As would be expected, recent job opportunities were especially important for the graduate applicants. Graduates out of the labor force were more likely to enlist than graduates who were working or looking for civilian jobs, and applicants with worse perceived earning opportunities or who were less satisfied with their recent employment also were more likely to enlist. As true for seniors wanting to attend college, high aptitude graduates enrolled in college (or wanting to attend) were less

likely to enlist. However, as also true for seniors, the probability of enlistment increased as the applicant's need for financial assistance to pay for school increased.

In general, the results suggest that civilian job opportunities, social support for enlisting, college plans, and finances have substantial effects on high quality youths' enlistment decisions, even after application. Even at this stage in the enlistment process, the military appears to compete with the civilian labor market and with opportunities for higher education. The implication is that advertising or messages from recruiters emphasizing the job stability, training, and educational opportunities provided by the military—including obtaining benefits to help pay for college at a later date—could be effective in recruiting efforts. Moreover, the significance of social support variables suggests that such messages might also be useful if directed at persons likely to discuss enlistment with the applicant, such as family members and teachers.

A major part of this research was to develop methods of analyzing enlistment intention responses to survey questions about the likelihood of enlisting under specific hypothetical options. The goal was to determine the potential applicability of survey results in helping to choose options for testing and in designing field tests of options. The 1983 Applicant Survey asked a series of enlistment intention questions concerning the respondent's likelihood of enlisting under existing programs and more generous hypothetical options. Similar information was collected in the 1981 Applicant Survey and in the 1981 Grey Advertising National Survey. We analyzed the three databases to compare the similarity of responses concerning the appeal of alternative options, for example, enlistment bonuses versus educational benefits. In addition, we used the national data to assess how closely enlistment rate changes predicted from the survey approach approximated the actual changes observed in field tests of specific options.

Two analytical approaches were developed to analyze responses to questions about one's likelihood of enlisting under hypothetical options. One, a simple approach, assumes all respondents in a given intention category are equally likely to enlist. In contrast, the second method does not make this assumption; it uses respondents' background characteristics to help determine their enlistment probability. The two approaches produce similar findings for basic analyses—such as comparing the effects of alternative types of options—in which the sample can be partitioned on the relevant respondent characteristics. However, the multivariate method can provide useful insights and more accurate enlistment rate predictions by accounting for the simultaneous effects of numerous respondent background factors.

Overall, our analyses support the reliability and validity of the survey approach. The survey results appear to be reasonable and in agreement with the observed effects on enlistment of variables such as school status and incentive value. Moreover, our analyses of responses across the three databases show that survey data can provide consistent information on the appeal of certain options relative to others. This implies that survey analyses could be useful in helping us select among alternative options to obtain the best results for available funds. Finally, we compared the enlistment rate changes predicted from the survey approach with the actual changes observed in the field tests of specific options. The survey approach predicted an enlistment increase of 7.9 percent under the Ultra-VEAP Kicker option of the Educational Assistance Test Program and an increase of 2.1 percent under the $8000 option of the Enlistment Bonus Test. The actual increases determined in the field tests were 8.7 percent and 4.1 percent, respectively. The analysis relies on a number of important assumptions. However, the findings indicate that the survey method can provide reasonable approximations of field test results. Such information, were it available when a field test was being considered, might save a considerable amount of time and money in designing and carrying out the test. Moreover, survey results could be used as a supplemental data source to help evaluate a broader spectrum of options than could feasibly be tested in the field.

Appendix A

SAMPLING AND FIELD INTERVIEWING PROCEDURES FOR THE 1983 APPLICANT SURVEY

OVERVIEW

This appendix presents a more detailed discussion of the sample selection, interviewing procedures, and sample characteristics for the 1983 Applicant Survey summarized in Sec. I. To carry out the survey, we drew a stratified random sample of the persons taking the enlistment qualification test (the Armed Services Vocational Aptitude Battery, i.e., the ASVAB) during April 1983. A 40-minute telephone interview of the applicants for military service was conducted during 21 April–22 June 1983. The average time between the ASVAB date and the date of the interview was four weeks. RAND and the Defense Manpower Data Center (DMDC) designed and managed the survey; however, the actual field interviewing was carried out by Amrigon, a professional survey organization acting as a contractor to DMDC. Amrigon collected the survey data using its central computer-assisted telephone interviewing facility.

INTERVIEWING PROCEDURES

The survey involved interviews with three types of respondents: (1) applicants who had *not* enlisted; (2) applicants who had enlisted and were in the Delayed Entry Program (persons waiting to go on active duty); and (3) applicants who had enlisted and were on active duty (individuals at basic training). Two versions of the questionnaire were used in interviewing—one form for applicants who had not enlisted at the time of the survey and another for those who had enlisted. The nonenlistee version is shown in App. B. Both versions of the questionnaire included an introductory statement informing the respondent of the purpose of the study, that participation was voluntary, and that the information collected was confidential.

Civilian Interviewing

Telephone interviews with civilians fell into two groups: (1) applicants who had *not* enlisted by the time of the interview and (2) persons who had signed enlistment contracts but were participants in the Delayed Entry Program awaiting a later date to go on active duty. Both groups, who together comprised about 98 percent of the total sample, were interviewed at their civilian addresses.

Active Duty Interviewing

As part of the sample selection process, RAND collected data from military enlistment records on the exact date that enlistees were scheduled to go on active duty. This information enabled the survey contractor to schedule the telephone interviews so that most new recruits in the sample would be interviewed at their civilian addresses before reporting for active duty. Nonetheless, a small proportion of the persons selected to participate in the 1983 Applicant Survey, roughly 2 percent, had entered active duty by the time of the interview. Special arrangements were made to track these individuals through service records, obtain authority to interview them, and conduct telephone interviews with them at their basic training installations. Interviewing new recruits at basic training presented difficulties because of the intense training schedule. However, each of the 13 training bases made arrangements for the selected recruits to be interviewed.

RAND matched the sample of applicants selected for the survey with military enlistment records in the MEPS Reporting System (MRS) to determine which individuals had enlisted, the bases where they were to attend basic training, and, as noted, the dates they were to go on active duty. The MRS records identified 153 recruits who needed to be scheduled for interviews at basic training.

To arrange for active duty interviewing, the Department of Defense sent a letter to the Assistant Secretaries of the Army, Navy, Air Force, and Marine Corps formally requesting their assistance and that of the Training Commands in implementing the survey. Each service authorized the interviewing of recruits and provided an officer to coordinate interviewing at each training base. The base officers notified selected recruits of the survey and arranged a time and place for the individual to call the survey contractor for the interview. If a recruit did not call in to be interviewed, DMDC recontacted the appropriate base project officer to make a second appointment.

SAMPLE CHARACTERISTICS

Sample Selection

Examinees meeting the survey eligibility criteria described in Sec. I were stratified by the enlistment bonus program available in their areas and by their quality level (i.e., whether or not they were high quality applicants). Applicants in the two areas offering experimental bonus programs (bonus test cells "B" and "C") were oversampled—25 percent of the sample versus 15 percent of the population—to permit meaningful statistical comparisons with applicants in the control program area (cell "A"). High quality examinees (i.e., high school diploma graduates scoring in AFQT categories I-IIIA) were slightly oversampled for analysis purposes as well—50 percent of the sample versus 46 percent of the population—since they were the persons who qualified for the special bonuses and the persons the services are interested in attracting;[1] persons without diplomas or who scored in AFQT categories IIIB-IV were slightly undersampled. The sample design is summarized in Table A.1. In each cell, the actual percentage of completed interviews was within one percentage point of the target value.

Telephone numbers are not routinely collected as part of the MEPS Reporting System data; thus, special procedures for obtaining them were required so the applicants could be interviewed. In consultation with MEPCOM, we decided that the most efficient method of collecting the required information was to have applicants fill out a short form at the time they took the written test. The telephone information was matched subsequently with MRS information for the applicants in

Table A.1

DESIGN OF APPLICANT SAMPLE
(Percentage of sample)

	Bonus Test Cell			
Applicant Quality	Control (A)	B	C	Total
High	25.0	12.5	12.5	50.0
Low	25.0	12.5	12.5	50.0
Total	50.0	25.0	25.0	100.0

[1]High school seniors were counted as diploma graduates since they took the ASVAB in April and, thus, nearly all of them completed the academic year.

our sample, and was given to the survey contractor. An important goal of the project was to computerize the telephone information and develop computer programs to automate the matching process. This was intended to provide a higher match rate and a shorter matching period than is feasible if matching is done by hand location of individual telephone number forms, as for the 1981 Applicant Survey. The automated procedure, described in a separate RAND Note, was highly successful.[2] Of 8121 applicants who had been selected initially from the computer test records, telephone numbers were matched for 7521 of the examinees (92.6 percent); these persons formed our sample for the 1983 Applicant Survey. The shorter matching period helped reduce the average time between ASVAB testing and interview from over six weeks in 1981 to about four weeks in 1983.

Completion Rates

Table A.2 describes the disposition of the 7521 military applicants selected for telephone interviews. The short turnaround time between

Table A.2

DISPOSTITION OF APPLICANT SAMPLE

Interview Status	Percent Distribution
Civilian (N = 7368)	
Completed (N = 6736)	91.4
Refused (N = 110)	1.5
Applicant unknown at phone number (N = 89)	1.2
Moved, not locatable (N = 174)	2.4
Not reachable (not home, etc.) (N = 258)	3.5
Active duty, scheduling requested (N = 140)	
Completed (N = 121)	86.4
Scheduled, did not call in (N = 5)	3.6
No longer on base (shipped, hospitalized, discharged, etc.) (N = 14)	10.0
Active duty, scheduling not requested (N = 13)	—
Overall response rate (completed as percentage of sample):	91.2

[2]See Jeffrey B. Garfinkle and Bruce R. Orvis, *Computerized Sample Selection Procedures for the Survey of Military Applicants*, The RAND Corporation, N-2380-FMP, September 1986.

ASVAB and interview provided by the automated matching process yielded very good results for the telephone number information that had been collected and helped to virtually eliminate the need for conducting interviews at basic training installations. There were only 153 active duty cases, compared with 7368 civilian cases.

The overall response rate was 91.2 percent. The refusal rate was very low, less than 2 percent; certain other individuals could not be interviewed because the phone numbers they provided were in error, they had moved, were not at home, or for other reasons. The overall response rate reflects a civilian response of 91.4 percent and a rate of 86.4 percent for the 140 new recruits we attempted to schedule. An additional group of 13 recruits could not be reached at home and arrived at basic training too late in the field period to be scheduled for interviews. There is little reason to suppose that these individuals differed in a systematic way from the interviewed sample. The overall response rate varied little among the sample selection cells (Table A.1). Among high quality applicants, the rates were 92.6, 93.0, and 93.7 percent for cells A, B, and C, respectively. Among low quality applicants, they were 89.3, 89.4, and 89.6 percent.

Characteristics of Applicant Groups

Table A.3 shows the AFQT, age, education, and race characteristics of three groups: (1) the population of ASVAB examinees meeting the eligibility criteria; (2) the stratified random sample of applicants whose records were matched with telephone numbers and who formed the interview sample sent to Amrigon; and (3) the respondents to the 1983 Applicant Survey. The data indicate that the percentage distributions for the three groups are very close on each characteristic. Thus, the results provide no evidence of bias in the selection of the telephone interview sample or in the respondent interviewing process.

Given these results and the uniformly high response rates across the six sample cells, there is little justification for weighting the survey data to conduct the analyses reported here. As noted, correspondence with the eligible population is already high. Moreover, since results are analyzed according to respondent quality, the slight oversampling of high quality applicants is irrelevant for weighting considerations. Also, bonus test cell—the other stratification criterion—is controlled explicitly in the analyses in Sec. II and was found to have little effect on the results presented in Secs. III and IV during the preliminary analyses. Finally, although high quality applicants taking the ASVAB in April may not be perfectly representative of the high quality applicants testing in a given year, there is little reason to believe that such

Table A.3

CHARACTERISTICS OF ELIGIBLE POPULATION (SCREENED ASVAB EXAMINEES), INTERVIEW SAMPLE, AND SURVEY RESPONDENTS

Characteristic	Percent Distribution		
	Eligible Population	Telephone Interview Sample	Applicant Survey Respondents
AFQT category			
I-II	36.9	39.1	39.6
IIIA	17.2	17.9	18.1
IIIB	22.4	20.8	20.5
IV	23.5	22.2	21.8
Age			
18 or under	45.4	45.9	47.2
19–20	26.8	26.7	26.7
21 or over	27.8	27.4	26.1
Education			
Grade 11 or less	18.3	16.5	15.6
High school graduate[a]	70.9	72.2	73.2
Some college	10.8	11.3	11.2
Race			
White	77.2	76.7	77.2
Black	18.8	19.6	19.2
Other	4.0	3.7	3.6
(N)	(24,212)	(7521)	(6857)

[a]Includes high school seniors at time of written test in April 1983.

discrepancies as may exist would affect the conclusions reached in this report.[3]

[3]The same logic applies to the parameter estimates in Sec. III, since the analyses control for numerous respondent characteristics which should capture the bulk of any possible discrepancies between persons testing in April and the applicant population for the full year.

Appendix B

THE APPLICANT QUESTIONNAIRE

The questionnaire has five sections: Section 1, Enlistment Status; Section 2, Military Recruiter and Job Counselor Information; Section 3, Civilian Job and Education Information; Section 4, Military Jobs and Benefits; and Section 5, Individual and Family Background. The questions are numbered sequentially throughout the questionnaire. Individual questions are identified by both section number and question number. For instance, the first question of Section 4 is question number 57, or S4/Q.57. Questions also can be identified by variable number, although a single question can provide the information for more than one variable. Thus, question S4/Q.57 asks the respondent to identify which services pay a cash bonus for enlisting by answering "yes" or "no" for each of the four services. There is one variable for each of the services (e.g., the Army is "V244").

Two versions of the questionnaire were used: one for applicants who had not enlisted at the time of the interview and a slightly modified form for those who had enlisted by the interview date. A copy of the form for applicants who had not enlisted is reproduced here. Enlistees were questioned concerning the conditions of their enlistment and the reasons for their service and job choices. Enlistees were not asked to provide the enlistment intention information requested of applicants who had not enlisted by the interview date.

The questionnaire reproduced here contains edited versions of the screen listings used by Amrigon's computer-assisted telephone interviewing (CATI) system. Several features of the screen listings require explanation. Text surrounded by the symbols "@2....@" is meant to represent boldface. For example, in S1/Q.4, the presentation of the phrase "standing for the very @2 highest @ likelihood of serving" is intended to direct the interviewer to emphasize the word "highest." Also, although they are not listed in the responses to each question, two missing data codes are used throughout the questionnaire. Responses of "don't know" are coded as "88;" refusals are coded as "99."

The statements abbreviated "CV" and "SK" serve to tailor the questionnaire to the pattern of responses provided by each interviewee. The symbol "<>" in these statements means "not equal to." The

numbers following "CV" and "SK" commands place the instructions in sequence. For example, "0" means before the first part of the question, "1" means after the first portion of the question, and "2" indicates after the second part of the question.

"CV" statements define "L" variables that allow the CATI system to alter the content or order of subsequent questions in response to the answers given to previous questions. In one application, "L" variables identify the wording of question segments controlled by "CV" commands. For example, the first question of Section 1 asks the respondent to estimate the likelihood that he will be serving in the military in the next few years. The second question asks if the respondent expects to enter military service as an enlisted man or as as officer. The "CV" statements after the first question serve to modify the second question in accord with the respondent's stated likelihood of serving. Thus, if the respondent indicates he definitely or probably will be serving in the military in the next few years, the second question asks "Do you expect that you will enter the military as an enlisted man or as an officer?" On the other hand, if the respondent reports that he is unlikely to enter military service, the second question asks "If you did serve in the military, do you expect that you would enter the military as an enlisted man or as an officer?"

"SK" statements issue skip commands that can move a respondent past questions that are inappropriate in light of his answers to previous questions. The skip pattern is controlled by the respondent's current value on an "L" variable or his response to a prior question. For example, question S1/Q.4.56 asks "As far as you know, does any service pay a cash bonus for enlisting . . . ?" On the next page of the questionnaire, question S1/Q.4.71 lists a number of factors which respondents can identify as important reasons for their interest in joining the military. One of the reasons is "I can get a cash bonus for enlisting." The "SK" statement with question S1/Q.4.71 ensures that respondents who think there is no cash bonus for enlisting will not be asked if an enlistment bonus is an important contributor to their interest in the military.

--- S1Q6.1 ---

SECTION 1: ENLISTMENT STATUS

HOW LIKELY IS IT THAT YOU WILL BE SERVING IN THE MILITARY IN THE NEAR FUTURE -- WOULD YOU SAY (READ CATEGORIES)?

(1) DEFINITELY

(2) PROBABLY

(3) PROBABLY NOT

(4) DEFINITELY NOT

SERVING : V60

[CV 1 IF V60<>1 AND V60<>2 THEN L10="IF YOU DID SERVE IN THE MILITARY" ELSE L10=""]
[CV 1 IF V60=1 OR V60=2 THEN L11="WILL" ELSE L11="WOULD"]

--- S1Q6.2A ---

Q19)

DO YOU EXPECT THAT YOU WILL ENTER THE MILITARY AS AN ENLISTED MAN OR AS AN OFFICER.

(1) ENLISTED MAN

(2) OFFICER

ENTER AS : V61

[SP 1 IF V60=4 AND V61=99 THEN GO TO S1Q6.4]

--- S170.2B ---

WHICH SERVICE [LI1] YOU ENTER?

(1) ARMY
(2) NAVY
(3) AIR FORCE
(4) MARINE CORPS
(5) ANY SERVICE

ENTER : V62

--- S170.2C ---

[LI1] THAT BE ON ACTIVE DUTY, IN THE RESERVES, OR IN THE NATIONAL GUARD?

(1) ACTIVE DUTY

(2) RESERVES

(3) NATIONAL GUARD

DUTY : V63

(SK 1 IF V63<>1 THEN GI TO S17...

--- S170.2D ---

IF YOU [LI2] ENLIST, APPROXIMATELY HOW LONG DO YOU THINK YOU [LI1] STAY ON ACTIVE DUTY IN THE MILITARY? WOULD YOU SAY (READ CATEGORIES, REPEAT LIST)--

(1) LESS THAN 2 YEARS,
(2) 2 YEARS,
(3) 3 YEARS,
(4) 4 YEARS,
(5) 5 TO 9 YEARS,
(6) 10 TO 19 YEARS, OR
(7) 20 YEARS OR MORE?

STAY/DUTY : V64

(CV 0 IF V62=1 OR V62=2 THEN DI2="DO" ELSE DI2="[I0"]

--- S17a.4 ---

NOW I'D LIKE TO ASK YOU IN ANOTHER WAY ABOUT THE LIKELIHOOD OF YOUR SERVING IN THE MILITARY. THINKING OF A SCALE FROM 0 TO 10, WITH 10 STANDING FOR THE VERY #2 HIGHEST # LIKELIHOOD OF SERVING AND 0 STANDING FOR THE VERY #2 LOWEST # LIKELIHOOD OF SERVING, HOW LIKELY IS IT THAT YOU WILL BE SERVING IN THE MILITARY IN THE NEXT FEW YEARS?

(PROBE: WHAT NUMBER FROM 0 TO 10 DO YOU CHOOSE?) MARK ONE

0...1...2...3...4...5...6...7...8...9...10
LOWEST HIGHEST

SERVING : V69

--- S17a.4.55 ---

AND NOW I HAVE A FEW QUESTIONS ABOUT MILITARY BENEFITS.

AS FAR AS YOU KNOW, WHAT IS THE STARTING #2 MONTHLY # PAY FOR AN ENLISTED PERSON IN THE MILITARY, #2 BEFORE # TAXES ARE DEDUCTED?

(PROBE: COULD YOU GIVE ME YOUR BEST GUESS?)

MIN. PAY : V70

--- S17a.4.56 ---

AS FAR AS YOU KNOW, DOES ANY SERVICE PAY A CASH BONUS FOR ENLISTING, IN ADDITION TO REGULAR MONTHLY PAY?

(PROBE IF NOT SURE: BASED ON WHAT YOU KNOW OR HAVE HEARD, DO YOU THINK ANY MILITARY SERVICE HAS SUCH A PROGRAM?)

(1) YES

(2) NO

BONUS : V71

--- S1/0.4.65 ---

IN SOME CASES, THE SERVICES MAY HELP YOU PAY FOR COLLEGE OR VOCATIONAL COURSES WHILE YOU ARE #2 IN # THE MILITARY. AS FAR AS YOU KNOW, DOES ANY SERVICE HAVE A PROGRAM THAT HELPS PAY FOR COLLEGE OR VOCATIONAL TRAINING #2 AFTER # YOU LEAVE THE MILITARY? (PROBE IF NOT SURE: BASED ON WHAT YOU KNOW OR HAVE HEARD, DO YOU THINK ANY MILITARY SERVICE HAS SUCH A PROGRAM?)

(1) YES

(2) NO

PAY/AFTER : V74

--- S1/0.4.71 ---

I'M GOING TO READ A LIST OF REASONS SOME PEOPLE HAVE FOR BEING INTERESTED IN JOINING THE MILITARY. PLEASE TELL ME IF EACH ONE IS AN IMPORTANT REASON FOR #2 YOUR # INTEREST IN JOINING, OR NOT AN IMPORTANT REASON FOR #2 YOU. #

(A) I WANT JOB SECURITY, THAT IS, A STEADY JOB.
(B) MILITARY SERVICE GIVES ME A CAREER I CAN BE PROUD OF.
(C) I WANT TO GET TRAINED IN A SKILL THAT WILL HELP ME GET A CIVILIAN JOB WHEN I GET OUT.
(D) MILITARY SERVICE PAYS WELL TO START.
(E) I CAN GET A CASH BONUS FOR ENLISTING.

(1) YES = IMPORTANT FOR ME
(2) NO = NOT IMPORTANT FOR ME

JOB SECUR.: V73 TRAINING : V75 BONUS : V77
PROUD OF : V74 PAYS WELL : V76

(CV 1 IF V73=1 THEN L1="JOB SECURITY/STEADY JOB")
(CV 2 IF V74=1 THEN L2="A CAREER YOU CAN BE PROUD OF")
(CV 3 IF V75=1 THEN L3="TRAINING TO HELP YOU GET A CIVILIAN JOB")
(SK 4 IF V71<>1 THEN GO TO S1/0.4.71F)
(CV 4 IF V76=1 THEN L4="MILITARY SERVICE PAYS WELL TO START")
(CV 5 IF V77=1 THEN L5="A CASH BONUS FOR ENLISTING")

```
--- S1/Q.4.71F ---

          (F)  I CAN GET MONEY TO CONTINUE MY SCHOOLING
               WHILE I'M #Z IN @  THE MILITARY.

          (G)  I CAN GET MONEY #Z AFTER @  I LEAVE THE
               MILITARY TO USE FOR COLLEGE OR VOCATIONAL
               TRAINING.


                 (1)  YES - IMPORTANT FOR ME

                 (2)  NO  - NOT IMPORTANT FOR ME

WHILE IN  : V78
MONEY AFT.: V79

                                                    [SK 1 IF V7Z<>1 THEN GO TO S1/Q.4.71H
[CV 1 IF V78=1 THEN L6="MONEY TO CONTINUE YOUR SCHOOLING WHILE YOU'RE IN THE
                                                                      MILITARY"]


--- S1/Q.4.71H ---

          (H)  THE SERVICE PROVIDES GOOD BENEFITS FOR ME AND MY
               FAMILY.


                 (1)  YES - IMPORTANT FOR ME

                 (2)  NO  - NOT IMPORTANT FOR ME

BENEFITS  : V80


                [CV 1 IF V80=1 THEN L6="GOOD BENEFITS FOR YOU AND YOUR FAMILY"]
                                  [CV 1 L10=V73+V74+V75+V76+V77+V78+V79+V80]
                                     [SK 1 IF L10>=15 THEN GO TO S1/Q.4.72A]
                   [SK 1 IF L10>=13 AND (V77=0 OR V79=0) THEN GO TO S1/Q.4.72A]
                    [SK 1 IF L10>=11 AND V77=0 AND V79=0 THEN GO TO S1/Q.4.72A]
```

--- S1/Q.4.72 ---

YOU SAID . . .

(1) [L1]
(2) [L2]
(3) [L3]
(4) [L4]
(5) [L5]
(6) [L6]
(7) [L7]
(8) [L8]

WERE IMPORTANT REASONS FOR YOUR INTEREST IN JOINING THE MILITARY. WHICH ONE OF THESE IS YOUR #2 MOST M IMPORTANT REASON FOR BEING INTERESTED IN JOINING THE MILITARY?

MOST IMP. : V81

(CV 1 L3="" \ L4="" \ L5="" \ L6="" \ L7="" \ L8="" \ L9="" \ L10="")

--- S1/Q.4.72A ---

WHAT IS THE MAIN REASON YOU HAVE NOT ENLISTED IN THE MILITARY SO FAR? (DO NOT READ CATEGORIES)

(1) STILL CONSIDERING JOINING
(2) COULDN'T GET A MILITARY JOB I WANTED
(3) GOT A BETTER CIVILIAN JOB
(4) WANTED A SHORTER ENLISTMENT TERM
(5) WANTED TO ENTER THE SERVICE AT A DIFFERENT TIME
(6) INSUFFICIENT PAY OR BENEFITS
(7) INELIGIBLE TO ENLIST
(8) WASN'T ELIGIBLE FOR THE SERVICE I WANTED
(9) FAILED THE ASVAB (3 HR. WRITTEN TEST)
(10) FAILED THE PHYSICAL EXAM
(11) DECIDED TO GO TO SCHOOL
(12) FAMILY RESPONSIBILITIES
(13) OTHER

MAIN : V82

--- S2.0/Q.4A ---

SECTION 2: MILITARY RECRUITER AND JOB COUNSELOR INFORMATION.
LET'S TALK ABOUT THE STEPS YOU TOOK SO FAR TOWARD ENLISTING.
AT THE TIME YOU #2 FIRST # TALKED TO A RECRUITER, HOW DID THE
FOLLOWING PEOPLE FEEL ABOUT YOUR JOINING THE MILITARY?
WERE . . . (READ LIST AND MARK ANSWER FOR EACH)
(A) YOUR PARENTS (OR GUARDIANS)
(B) YOUR BROTHERS OR SISTERS
(C) YOUR FRIENDS
(D) YOUR TEACHERS, COUNSELORS, OR COACHES . . .

(1) VERY FAVORABLE
(2) SOMEWHAT FAVORABLE
(3) NEITHER FAVORABLE NOR UNFAVORABLE
(4) SOMEWHAT UNFAVORABLE
(5) VERY UNFAVORABLE
(6) DIDN'T TALK TO THIS PERSON #2 (DO NOT READ) #

(IF OPINIONS WERE MIXED, PROBE FOR THE ATTITUDE OF #2 MOST # PEOPLE OR THE #2 CLOSEST # PARENT/SIBLING/FRIEND/TEACHER, ETC.)

PARENTS : V83
SIBLINGS : V84
FRIENDS : V85
TEACHERS : V86

--- S2.0/Q.5 ---

WHICH ACTIVE DUTY SERVICES DID YOU TALK TO: DID YOU TALK WITH RECRUITERS FROM THE (READ EACH SERVICE AND MARK "YES" OR "NO")?

(A) ARMY
(B) NAVY
(C) AIR FORCE
(D) MARINE CORPS

(1) YES
(2) NO

ARMY : V87
NAVY : V88
AIR FORCE : V89
MARINES : V90

(CV 4 L11=V87+V88+V89+V90)
(CV 4 IF L11<7 THEN L13="FIRST")
(CV 4 L21="NOW LET'S TALK ABOUT SEVERAL PROGRAMS THAT MAY BE OFFERED")
(CV 4 L22="BY SOME OF THE SERVICES.")
(CV 4 L12=0)

--- S2.0/Q.6 ---

WHEN YOU FIRST TALKED TO A RECRUITER, WHICH SERVICE WAS YOUR FIRST CHOICE,SECOND CHOICE,THIRD CHOICE, AND LAST CHOICE

(1) ARMY
(2) NAVY
(3) AIR FORCE
(4) MARINE CORPS

1ST CHOICE: V91 — 3RD CHOICE: V87
2ND CHOICE: V88 — 4TH CHOICE: V89

[CV 0 L12=0]
[CV 1 IF V91=1 THEN L14="ARMY"]
[CV 1 IF V91=2 THEN L14="NAVY"]
[CV 1 IF V91=3 THEN L14="AIR FORCE"]
[CV 1 IF V91=4 THEN L14="MARINE CORPS"]

--- S2.0/Q.7 ---

[L21]
[L22]. [L13] LET'S DISCUSS YOUR CONVERSATIONS

WITH ARMY RECRUITERS.

WHEN DID YOU #2 FIRST # TALK TO A RECRUITER FROM THE ARMY?

(RECORD MONTH AND YEAR)

WHEN DID YOU #2 LAST # TALK TO AN ARMY RECRUITER?

(RECORD MONTH AND YEAR)

1ST MONTH : V92 — LAST MONTH: V94
1ST YEAR : V93 — LAST YEAR : V95

[SK 0 IF L11=8 THEN GO TO S2/Q.14]
[CV 0 IF (V91=1 AND V87=1) OR (V91=2 AND V88=1) OR (V91=3 AND V89=1) OR (V91=4 AND V90=1) THEN L18=V91]
[CV 0 IF L18<>V19 THEN L19=V19]
[CV 0 IF (V19=1 AND V87<>1) OR (V19=2 AND V88<>1) OR (V19=3 AND V89<>1) OR (V19=4 AND V90<>1) THEN L20=9]
[SK 0 IF L12=0 AND L18<>1 AND (L19<>0 OR (L19=0 AND L20<>9)) THEN GO TO S2.1/Q.7]
[SK0 IF (L12=1 AND L1>6) OR L12>1 THEN GO TO S2Q.14]
[SK 0 IF L12=1 AND L19<>1 AND L20<>9 AND L19<>6 THEN GO TO S2.1/Q.7]
[SK 0 IF V87<>1 THEN GO TO S2.1/Q.7]
[CV 1 L13="NOW"]
[CV 1 L21=""]
[CV 1 L22=""]

--- S2.0/0.8 ---

DURING ANY OF YOUR CONVERSATIONS WITH AN ARMY RECRUITER, DID HE SAY YOU WERE QUALIFIED TO ENLIST IN THE ARMY, OR THAT YOU WERE #2 NOT # QUALIFIED TO ENLIST, OR DIDN'T HE SAY WHETHER YOU WERE QUALIFIED?

(1) QUALIFIED

(2) NOT QUALIFIED

(3) DIDN'T SAY WHETHER QUALIFIED

QUALIFIED : V96

(SR 0 IF V95<>2 THEN GO TO S2.1/0.1
(CV 0 IF V95<>2 THEN B12=B12+1)

--- S2.0/0.9 ---

DID HE SAY THE ARMY HAS A PROGRAM THAT PAYS A #2 CASH # #2 BONUS # FOR ENLISTING?

(1) YES

(2) NO

BONUS : V97

--- S2.0/0.10 ---

DID HE SAY THE ARMY HAS A PROGRAM THAT GIVES A #2 GUARANTEED LOCATION AFTER TRAINING? #

(1) YES

(2) NO

LOCATION : V98

--- S2.0/0.11 ---

DID HE SAY THE ARMY HAS A PROGRAM THAT #2 GUARANTEES #
#2 TRAINING FOR A PARTICULAR JOB? #

(1) YES

(2) NO

TRAINING : V99

ISR 1 IF V99<>1 THEN GO TO S2.0/0.12#

--- S2.0/0.11A ---

DID HE SAY #2 YOU # COULD GET GUARANTEED TRAINING FOR
A JOB YOU #2 WANTED# #

(1) YES

(2) NO

TRAINING : V100

--- S2.0/0.12 ---

DID HE SAY THERE IS A PROGRAM IN WHICH AN ENLISTEE CAN FINISH
HIGH SCHOOL OR TAKE COLLEGE COURSES #2 WHILE HE IS IN # THE
ARMY?

(1) YES
(2) NO

DID HE SAY THERE IS A PROGRAM IN WHICH THE GOVERNMENT WILL
HELP AN ENLISTEE PAY FOR COLLEGE OR VOCATIONAL TRAINING
#2 AFTER # HE LEAVES THE ARMY?

(1) YES
(2) NO

WHILE IN : V101
AFTER : V102

(CV 2 112=11,2+11

--- S2.1/Q.7 ---

[L21]
[L22]. [L13] LET'S DISCUSS YOUR CONVERSATIONS

WITH NAVY RECRUITERS.

WHEN DID YOU @2 FIRST * TALK TO A RECRUITER FROM THE NAVY?

(RECORD MONTH AND YEAR)

WHEN DID YOU @2 LAST * TALK TO A NAVY RECRUITER?

(RECORD MONTH AND YEAR)

1ST MONTH : V103 LAST MONTH: V105
1ST YEAR : V104 LAST YEAR : V106

[SK 0 IF L12=0 AND L18<>2 AND (L19<>0 OR (L19=0 AND L20<>9)) THEN GO TO S2.2/Q7]
[SK 0 IF L12=1 AND L19<>2 AND L20<>9 AND L19<>0 THEN GO TO S2.2/Q7]
[SK 0 IF V88<>1 THEN GO TO S2.2/Q7]
[CV 1 L13="NOW"]
[CV 1 L21=""]
[CV 1 L22=""]

--- S2.1/Q.8 ---

DURING ANY OF YOUR CONVERSATIONS WITH A NAVY RECRUITER, DID HE SAY YOU WERE QUALIFIED TO ENLIST IN THE NAVY, OR THAT YOU WERE #2 NOT @ QUALIFIED TO ENLIST, OR DIDN'T HE SAY WHETHER YOU WERE QUALIFIED?

(1) QUALIFIED

(2) NOT QUALIFIED

(3) DIDN'T SAY WHETHER QUALIFIED

QUALIFIED : V107

[SK 0 IF V106<82 THEN GO TO S2.2/Q7]
[CV 0 IF V106<82 THEN L12=L12+1]

--- S2.1/0.9 ---

DID HE SAY THE NAVY HAS A PROGRAM THAT PAYS A #2 CASH #
#2 BONUS # FOR ENLISTING?

(1) YES

(2) NO

BONUS : V108

--- S2.1/0.10 ---

DID HE SAY THE NAVY HAS A PROGRAM THAT GIVES A
#2 GUARANTEED LOCATION AFTER TRAINING? #

(1) YES

(2) NO

LOCATION : V109

--- S2.1/0.11 ---

DID HE SAY THE NAVY HAS A PROGRAM THAT #2 GUARANTEES #
#2 TRAINING FOR A PARTICULAR JOB? #

(1) YES

(2) NO

TRAINING : V110

(SR I IF V110<>1 THEN GO TO S2.1/0.12)

--- S2.1/0.11A ---

DID HE SAY #2 YOU # COULD GET GUARANTEED TRAINING FOR
A JOB YOU #2 WANTED? #

(1) YES

(2) NO

TRAINING : V111

--- S2.1/Q.12 ---

DID HE SAY THERE IS A PROGRAM IN WHICH AN ENLISTEE CAN FINISH HIGH SCHOOL OR TAKE COLLEGE COURSES #2 WHILE HE IS IN # THE NAVY?

(1) YES
(2) NO

DID HE SAY THERE IS A PROGRAM IN WHICH THE GOVERNMENT WILL HELP AN ENLISTEE PAY FOR COLLEGE OR VOCATIONAL TRAINING #2 AFTER # HE LEAVES THE NAVY?

(1) YES
(2) NO

WHILE IN : V112
AFTER : V113

(CV 2 L12=L12+1)

--- S2.2/Q.7 ---

(L21)
(L22). (L13) LET'S DISCUSS YOUR CONVERSATIONS WITH AIR FORCE RECRUITER>.

WHEN DID YOU #2 FIRST # TALK TO A RECRUITER FROM THE AIR FORCE?

(RECORD MONTH AND YEAR)

WHEN DID YOU #2 LAST # TALK TO AN AIR FORCE RECRUITER?

(RECORD MONTH AND YEAR)

1ST MONTH : V114
1ST YEAR : V115
LAST MONTH: V116
LAST YEAR : V117

(SK 0 IF L12=0 AND L18<>3 AND (L19<>0 OR (L19=0 AND L20<>9)) THEN GO TO S2.3/Q7]
(SK 0 IF L12=1 AND L19<>3 AND L20<>9 AND L19<>0 THEN GO TO S2.3/Q7]
(SK 0 IF V89<>1 THEN GO TO S2.3/Q7]
(CV 1 L13="NO#")
(CV 1 L21="")
(CV 1 L22="")

--- S2.2/Q.8 ---

DURING ANY OF YOUR CONVERSATIONS WITH AN AIR FORCE RECRUITER, DID HE SAY YOU WERE QUALIFIED TO ENLIST IN THE AIR FORCE, OR THAT YOU WERE @2 NOT @ QUALIFIED TO ENLIST, OR *DIDN'T* HE SAY WHETHER YOU WERE QUALIFIED?

(1) QUALIFIED

(2) NOT QUALIFIED

(3) DIDN'T SAY WHETHER QUALIFIED

QUALIFIED : V118

(SK Q IF V117<62 THEN GO TO S2.3/Q7)
(CV Q IF V117<62 THEN [12=012+1]

--- S2.2/Q.9 ---

DID HE SAY THE AIR FORCE HAS A PROGRAM THAT PAYS A @2 CASH BONUS @ FOR ENLISTING?

(1) YES

(2) NO

BONUS : V119

--- S2.2/Q.10 ---

DID HE SAY THE AIR FORCE HAS A PROGRAM THAT GIVES A @2 GUARANTEED LOCATION AFTER TRAINING? @

(1) YES

(2) NO

LOCATION : V120

--- S2.270.11 ---

DID HE SAY THE AIR FORCE HAS A PROGRAM THAT
@2 GUARANTEES TRAINING FOR A PARTICULAR JOB? #

(1) YES

(2) NO

TRAINING : V121

(SK 1 IF V121<>1 THEN GO TO S2.270.12)

--- S2.270.11A ---

DID HE SAY @2 YOU # COULD GET GUARANTEED TRAINING FOR
A JOB YOU @2 WANTED, #

(1) YES

(2) NO

TRAINING : V122

--- S2.270.12 ---

DID HE SAY THERE IS A PROGRAM IN WHICH AN ENLISTEE CAN FINISH
HIGH SCHOOL OR TAKE COLLEGE COURSES @2 WHILE HE IS IN # THE
AIR FORCE?

(1) YES
(2) NO

DID HE SAY THERE IS A PROGRAM IN WHICH THE GOVERNMENT WILL
HELP AN ENLISTEE PAY FOR COLLEGE OR VOCATIONAL TRAINING
@2 AFTER # HE LEAVES THE AIR FORCE?

(1) YES
(2) NO

WHILE IN : V123
AFTER : V124

(CV 2 L12=L12+1)

--- S2.370.7 ---

(L21)
(L22). (L13) LET'S DISCUSS YOUR CONVERSATIONS WITH MARINE CORPS RECRUITERS?

WHEN DID YOU #2 FIRST # TALK TO A RECRUITER FROM THE MARINE CORPS?
(RECORD MONTH AND YEAR)

WHEN DID YOU #2 LAST # TALK TO A MARINE CORPS RECRUITER?

(RECORD MONTH AND YEAR)

1ST MONTH : V125 LAST MONTH: V127
1ST YEAR : V126 LAST YEAR : V128

[SK 0 IF (L12=1 AND L11>6) OR L12>1 THEN GO TO S2.370.14]
[SK 0 IF L12=0 AND L18<>4 AND (L19<>0 OR (L19=0 AND L20<>99)) THEN GO TO S2.370.7]
[SK 0 IF L12=1 AND L19<>4 AND L20<>99 AND L19<>0 THEN GO TO S2.370.7]
[SK 0 IF V90<>1 THEN GO TO S2.370.7]
[CV 1 L13="YOUR"]
[CV 1 L21=""]
[CV 1 L22=""]

--- S2.370.8 ---

DURING ANY OF YOUR CONVERSATIONS WITH A MARINE CORPS RECRUITER, DID HE SAY YOU WERE QUALIFIED TO ENLIST IN THE MARINES, OR THAT YOU WERE #2 NOT # QUALIFIED TO ENLIST, OR DIDN'T HE SAY WHETHER YOU WERE QUALIFIED?

(1) QUALIFIED

(2) NOT QUALIFIED

(3) DIDN'T SAY WHETHER QUALIFIED

QUALIFIED : V129

[SK 0 IF V129<>2 THEN GO TO S2.370.7]
[CV 0 IF V129<>2 THEN L12=L12+1]

--- S2.3/0.9 ---

DID HE SAY THE MARINE CORPS HAS A PROGRAM THAT PAYS A
#2 CASH BONUS @ FOR ENLISTING?

(1) YES

(2) NO

BONUS : V130

--- S2.3/0.10 ---

DID HE SAY THE MARINE CORPS HAS A PROGRAM THAT GIVES
A #2 GUARANTEED LOCATION AFTER TRAINING? @

(1) YES

(2) NO

LOCATION : V131

--- S2.3/0.11 ---

DID HE SAY THE MARINE CORPS HAS A PROGRAM THAT
@2 GUARANTEES TRAINING FOR A PARTICULAR JOB? @

(1) YES

(2) NO

TRAINING : V132

[SR 1 IF V132<>1 THEN GO TO S2.3/0.12]

--- S2.3/0.11A ---

DID HE SAY @2 YOU @ COULD GET GUARANTEED TRAINING FOR
A JOB YOU @2 WANTED. @

(1) YES

(2) NO

TRAINING : V133

[GO TO S2.3/0.11]

--- S2.3/9.12 ---

DID HE SAY THERE IS A PROGRAM IN WHICH AN ENLISTEE CAN FINISH HIGH SCHOOL OR TAKE COLLEGE COURSES #2 WHILE HE IS IN # THE MARINE CORPS?

(1) YES
(2) NO

DID HE SAY THERE IS A PROGRAM IN WHICH THE GOVERNMENT WILL HELP AN ENLISTEE PAY FOR COLLEGE OR VOCATIONAL TRAINING #2 AFTER # HE LEAVES THE MARINE CORPS?

(1) YES
(2) NO

WHILE IN : V134
AFTER : V135

(SK 2 IF L12<2 AND L11<7 THEN GO TO S2.9/9.7]
(CV 2 L12=L12+1]

--- S2/9.14 ---

YOU SAID THE (L14] WAS YOUR #2 FIRST # CHOICE. WHY DID YOU TALK TO ANOTHER SERVICE? WAS IT BECAUSE . . .

(AA) YOU DID NOT QUALIFY FOR THE (L14]?

(1) YES

(2) NO

NOT QUAL. : V136

(SK 0 IF L11>=7 OR V91>4 THEN GO TO S2/9.16]
(SK 1 IF V136=1 THEN GO TO S2/9.16]

--- S2/Q.14A ---

WAS IT BECAUSE YOU WANTED . ..

(A) A PARTICULAR KIND OF JOB TRAINING.
(B) A GUARANTEED LOCATION FOR YOUR FIRST ASSIGNMENT AFTER TRAINING.
(C) A 2-YEAR OR 3-YEAR TERM OF ENLISTMENT.
(D) A CERTAIN DATE FOR GOING ON ACTIVE DUTY.
(E) AN ENLISTMENT BONUS
(F) A SPECIAL EDUCATIONAL BENEFIT THAT HELPS PAY FOR COLLEGE OR VOCATIONAL TRAINING #2 AFTER # YOU LEAVE THE SERVICE.

(1) YES
(2) NO

TRAINING	: V137	TERM	: V139	BONUS	: V141
LOCATION	: V138	DATE	: V140	BENEFIT	: V142

--- S2/Q.14G ---

(G) TO GET MORE INFORMATION AND COMPARE THE SERVICES, OR

(H) WAS THERE SOME OTHER REASON? (SPECIFY)

(1) YES

(2) NO

INFO	: V143	SPECIFY	: V145
OTHER	: V144		

[SK 2 IF V144<>1 THEN GO TO S2/Q.15]

--- S2/Q.16 ---

HAVE YOU EVER TAKEN THE PHYSICAL EXAMINATION FOR THE MILITARY?

(1) YES

(2) NO

EXAM : V146

[SK 1 IF V146<>1 THEN GO TO S3/Q.26A/B]

--- S2/Q.16A ---

DID YOU PASS THE PHYSICAL, WERE YOU TEMPORARILY DISQUALIFIED, OR WERE YOU PERMANENTLY DISQUALIFIED? IF YOU TOOK THE PHYSICAL MORE THAN ONCE, ANSWER FOR THE #2 LAST # TIME YOU TOOK IT.

(1) PASSED

(2) TEMPORARILY DISQUALIFIED

(3) PERMANENTLY DISQUALIFIED

PHYSICAL : V147

--- S2/Q.17 ---

HAVE YOU EVER TALKED TO A #2 MILITARY JOB COUNSELOR # -- THAT IS, THE PERSON AT THE MILITARY ENTRANCE PROCESSING STATION WHO ASSIGNS YOU A JOB IN THE #2 ACTIVE # #2 DUTY # SERVICE #2 AFTER # YOU TAKE THE WRITTEN AND PHYSICAL EXAMS?

(1) YES

(2) NO

TALKED TO : V148

(SK 1 IF V148<>1 THEN GO TO S3/Q.26A/B)

--- S2/Q.18 ---

DID YOU TALK TO A JOB COUNSELOR FROM THE (READ EACH SERVICE AND MARK "YES" OR "NO")?

(A) ARMY
(B) NAVY
(C) AIR FORCE
(D) MARINE CORPS

(1) YES
(2) NO

ARMY : V149
NAVY : V150
AIR FORCE : V151
MARINES : V152

(CV 4 L11=V149+V150+V151+V152)
(CV 4 L20=0)
(CV 4 L12=0)

--- S2A1/Q.19 ---

LET'S DISCUSS YOUR CONVERSATIONS WITH THE ARMY JOB COUNSELOR.

DID THE ARMY JOB COUNSELOR TELL YOU THAT YOU WERE QUALIFIED TO ENLIST, OR THAT YOU WERE #2 NOT # QUALIFIED TO ENLIST?

(1) QUALIFIED
(2) NOT QUALIFIED

DID HE SAY THE ARMY HAS A PROGRAM THAT PAYS A #2 CASH # #2 BONUS # FOR ENLISTING?

(1) YES
(2) NO

QUALIFIED : V153
CASH BONUS: V154

[SK 0 IF L11=8 THEN GO TO S3/Q.26A/B]
[CV 0 L18=V19]
[CV 0 IF (V19=1 AND V149<>1) OR (V19=2 AND V150<>1) OR (V19=3 AND V151<>1) OR (V19=4 AND V152<>1) THEN L20=9]
[SK 0 IF L12>0 THEN GO TO S3/Q.26A/B]
[SK 0 IF L12=0 AND L18<>1 AND L20<>9 THEN GO TO S2B2/Q.19]
[SK 0 IF V149<>1 THEN GO TO S2B2/Q.19]

--- S2A1/Q.21 ---

DID HE SAY THE ARMY HAS A PROGRAM THAT GIVES A #2 GUARANTEED LOCATION AFTER TRAINING? #

(1) YES
(2) NO

DID HE SAY THE ARMY HAS A PROGRAM THAT #2 GUARANTEES TRAINING FOR A PARTICULAR JOB? #

(1) YES
(2) NO

LOCATION : V155
TRAINING : V156

[SK 2 IF V156<>1 THEN GO TO S2A1/Q.24]

--- S2A1/Q.23 ---

DID HE SAY #2 YOU # COULD GET GUARANTEED TRAINING FOR A JOB YOU #2 WANTED? #

(1) YES

(2) NO

TRAINING : V157

--- S2A1/Q.24 ---

DID HE SAY THERE IS A PROGRAM IN WHICH AN ENLISTEE CAN FINISH HIGH SCHOOL OR TAKE COLLEGE COURSES #2 WHILE HE # #2 IS IN # THE ARMY?

(1) YES

(2) NO

COURSES : V158

--- S2A1/Q.25 ---

DID HE SAY THERE IS A PROGRAM IN WHICH THE GOVERNMENT WILL HELP AN ENLISTEE PAY FOR COLLEGE OR VOCATIONAL TRAINING #2 AFTER # HE LEAVES THE ARMY?

(1) YES

(2) NO

PAY FOR : V159

(CV : LIZ=LIZ+1)

--- S2B2/0.19 ---

LET'S DISCUSS YOUR CONVERSATIONS WITH THE NAVY JOB

COUNSELOR.

DID THE NAVY JOB COUNSELOR TELL YOU THAT YOU WERE
QUALIFIED TO ENLIST, OR THAT YOU WERE @2 NOT @ QUALIFIED
TO ENLIST?

(1) QUALIFIED
(2) NOT QUALIFIED

DID HE SAY THE NAVY HAS A PROGRAM THAT PAYS A @2 CASH @
@2 BONUS @ FOR ENLISTING?

(1) YES
(2) NO

QUALIFIED : V160
CASH BONUS: V161

(SK 0 IF L12>0 THEN GO TO S3/0.26A/B)
(SK 0 IF L12=0 AND L18<>2 AND L20<>9 THEN GO TO S2C2/0.19)
(SK 0 IF V150<>1 THEN GO TO S2C2/0.19)

--- S2B2/0.21 ---

DID HE SAY THE NAVY HAS A PROGRAM THAT GIVES A
@2 GUARANTEED LOCATION AFTER TRAINING? @

(1) YES
(2) NO

DID HE SAY THE NAVY HAS A PROGRAM THAT
@2 GUARANTEES TRAINING FOR A PARTICULAR JOB? @

(1) YES
(2) NO

LOCATION : V162
TRAINING : V163

(SK 4 IF V163<>1 THEN GO TO S2B2/0.24)

--- S282/Q.23 ---

DID HE SAY @2 YOU @ COULD GET GUARANTEED TRAINING FOR A JOB YOU @2 WANTED? @

(1) YES

(2) NO

TRAINING : V164

--- S282/Q.24 ---

DID HE SAY THERE IS A PROGRAM IN WHICH AN ENLISTER CAN FINISH HIGH SCHOOL OR TAKE COLLEGE COURSES @2 WHILE HE @ @2 IS IN @ THE NAVY?

(1) YES

(2) NO

COURSES : V165

--- S282/Q.25 ---

DID HE SAY THERE IS A PROGRAM IN WHICH THE GOVERNMENT WILL HELP AN ENLISTEE PAY FOR COLLEGE OR VOCATIONAL TRAINING @2 AFTER @ HE LEAVES THE NAVY?

(1) YES

(2) NO

PAY FOR : V166

(CV 1 D12=D12+1)

--- S2C2/Q.19 ---

LET'S DISCUSS YOUR CONVERSATIONS WITH THEN AIR FORCE JOB COUNSELOR.

DID THE AIR FORCE JOB COUNSELOR TELL YOU THAT YOU WERE QUALIFIED TO ENLIST, OR THAT YOU WERE @2 NOT @ QUALIFIED TO ENLIST?

(1) QUALIFIED
(2) NOT QUALIFIED

DID HE SAY THE AIR FORCE HAS A PROGRAM THAT PAYS A @2 CASH @ @2 BONUS @ FOR ENLISTING?

(1) YES
(2) NO

QUALIFIED : V167
CASH BONUS: V168

(SK 0 IF L12>0 THEN GO TO S3/Q.26A/B)
(SK 0 IF L12=0 AND L18<>3 AND L20<>9 THEN GO TO S2D2/Q.19)
(SK 0 IF V151<>1 THEN GO TO S2D2/Q.19)

--- S2C2/Q.21 ---

DID HE [illegible] THE AIR FORCE HAS A PROGRAM THAT GIVES A @2 GUA[illegible]TEED LOCATION AFTER TRAINING? @

(1) YES
(2) NO

DID HE SAY THE AIR FORCE HAS A PROGRAM THAT @2 GUARANTEES TRAINING FOR A PARTICULAR JOB? @

(1) YES
(2) NO

LOCATION : V169
TRAINING : V170

(SK 2 IF V170<>1 THEN GO TO S2C2/Q.24)

--- S2C2/Q.23 ---

DID HE SAY @2 YOU @ COULD GET GUARANTEED TRAINING FOR A JOB YOU @2 WANTED? @

(1) YES

(2) NO

TRAINING : V171

--- S2C2/Q.24 ---

DID HE SAY THERE IS A PROGRAM IN WHICH AN ENLISTEE CAN FINISH HIGH SCHOOL OR TAKE COLLEGE COURSES @2 WHILE HE @ @2 IS IN @ THE AIR FORCE?

(1) YES

(2) NO

COURSES : V172

--- S2C2/Q.25 ---

DID HE SAY THERE IS A PROGRAM IN WHICH THE GOVERNMENT WILL HELP AN ENLISTEE PAY FOR COLLEGE OR VOCATIONAL TRAINING @2 AFTER @ HE LEAVES THE AIR FORCE?

(1) YES

(2) NO

PAY FOR : V173

(CV 1 L12=L12+1)

--- S2D2/0.19 ---

LET'S DISCUSS YOUR CONVERSATIONS WITH THE MARINE CORPS

JOB COUNSELOR.

DID THE MARINE CORPS JOB COUNSELOR TELL YOU THAT YOU WERE QUALIFIED TO ENLIST, OR THAT YOU WERE @2 NOT @ QUALIFIED TO ENLIST?

(1) QUALIFIED
(2) NOT QUALIFIED

DID HE SAY THE MARINE CORPS HAS A PROGRAM THAT PAYS A @2 CASH BONUS @ FOR ENLISTING?

(1) YES
(2) NO

QUALIFIED : V174
CASH BONUS: V175

[SK 0 IF L12>0 THEN GO TO S3/0.26A/B]
[SK 0 IF L12=0 AND L18<>4 AND L20<>9 THEN GO TO S2A1/0.19]
[SK 0 IF V152<>1 THEN GO TO S2A1/0.19]

--- S2D2/0.21 ---

DID HE SAY THE MARINE CORPS HAS A PROGRAM THAT GIVES A @2 GUARANTEED LOCATION AFTER TRAINING? @

(1) YES
(2) NO

DID HE SAY THE MARINE CORPS HAS A PROGRAM THAT @2 GUARANTEES TRAINING FOR A PARTICULAR JOB? @

(1) YES
(2) NO

LOCATION : V176
TRAINING : V177

[SK 2 IF V177<>1 THEN GO TO S2D2/0.24]

--- S2D2/Q.23 ---

DID HE SAY @2 YOU @ COULD GET GUARANTEED TRAINING FOR A JOB YOU @2 WANTED? @

(1) YES

(2) NO

TRAINING : V178

--- S2D2/Q.24 ---

DID HE SAY THERE IS A PROGRAM IN WHICH AN ENLISTEE CAN FINISH HIGH SCHOOL OR TAKE COLLEGE COURSES @2 WHILE HE @ @2 IS IN @ THE MARINE CORPS?

(1) YES

(2) NO

COURSES : V179

--- S2D2/Q.25 ---

DID HE SAY THERE IS A PROGRAM IN WHICH THE GOVERNMENT WILL HELP AN ENLISTEE PAY FOR COLLEGE OR VOCATIONAL TRAINING @2 AFTER @ HE LEAVES THE MARINE CORPS?

(1) YES

(2) NO

PAY FOR : V180

(CV 1 L12=L12+1)

--- S3/Q.26A/B ---

SECTION 3: CIVILIAN JOB AND EDUCATION INFORMATION

NOW I HAVE A FEW QUESTIONS ABOUT YOUR JOB AND EDUCATIONAL EXPERIENCES.

WHAT WERE YOU DOING DURING MARCH 1983, ABOUT 10 WEEKS AGO? WERE YOU . . . (READ CATEGORIES)?

(A) WORKING FULL-TIME OR PART-TIME (INCLUDE AS WORKING PERSONS NOT WORKING IN MARCH BECAUSE OF TEMPORARY ILLNESS, VACATION, OR STRIKE)?

(B) LOOKING FOR WORK?

(1) YES
(2) NO

WORKING : V181
LOOKING : V182

[SK 1 IF V181=1 THEN GO TO S3/Q.26C/D]

--- S3/Q.26C/D ---

WERE YOU . . .

(C) TAKING HIGH SCHOOL CLASSES (INCLUDES PERSONS TAKING COURSES IN COLLEGE OR ELSEWHERE FOR HIGH SCHOOL CREDIT)?

(D) TAKING ACADEMIC COURSES AT A TWO- OR FOUR-YEAR COLLEGE?

(1) YES
(2) NO

HIGH SCH. : V183
ACADEMIC : V184

[SK 1 IF V183=1 THEN GO TO S3/Q.26E]

--- S3/Q.26E ---

WERE YOU . . .

(E) TAKING VOCATIONAL OR TECHNICAL COURSES AFTER LEAVING HIGH SCHOOL (FOR EXAMPLE, VOCATIONAL, TRADE, BUSINESS, OR OTHER CAREER TRAINING SCHOOL)?

(1) YES
(2) NO

COURSES : V185

--- S3/Q.27A/B ---

WHAT WERE YOU DOING DURING OCTOBER, 1982, ABOUT 6 MONTHS AGO? WERE YOU . . . (READ CATEGORIES)

(A) WORKING FULL-TIME OR PART-TIME (INCLUDE AS WORKING PERSONS NOT WORKING IN OCTOBER BECAUSE OF TEMPORARY ILLNESS, VACATION, OR STRIKE)?

(B) LOOKING FOR WORK?

(1) YES
(2) NO

WORKING : V186
LOOKING : V187

[SR 1 IF V186=1 THEN GO TO S3/Q.274D]

--- S3/Q.27C/D ---

WERE YOU . . .

(C) TAKING HIGH SCHOOL COURSES (INCLUDE PERSONS TAKING COURSES IN COLLEGE OR ELSEWHERE FOR HIGH SCHOOL CREDIT)?

(D) TAKING ACADEMIC COURSES AT A TWO- OR FOUR-YEAR COLLEGE?

(1) YES
(2) NO

HIGH SCH. : V188
ADADEMIC : V189

[SK 1 IF V188=1 THEN GO TO S3/Q.27E]

--- S3/Q.27E ---

WERE YOU . . .

(E) TAKING VOCATIONAL OR TECHNICAL COURSES AFTER LEAVING HIGH SCHOOL (FOR EXAMPLE, VOCATIONAL, TRADE, BUSINESS, OR OTHER CAREER TRAINING SCHOOL)?

(1) YES
(2) NO

COURSES : V190

[CV 1 L15="OCTOBER 1982"]
[CV 1 IF V184=1 THEN L15="MARCH 1983"]

--- S3/Q.28 ---

WERE YOU ATTENDING A 2-YEAR OR JUNIOR COLLEGE, OR A 4-YEAR COLLEGE OR UNIVERSITY IN {L15}?

(1) 2-YEAR COLLEGE OR JUNIOR COLLEGE

(2) 4-YEAR COLLEGE OR UNIVERSITY

COLLEGE : V191

[SK 0 IF V184<>1 AND V189<>1 THEN GO TO S3/Q.30]

--- S3/Q.29 ---

WAS IT A PRIVATE COLLEGE, OR A STATE OR PUBLIC COLLEGE?

(1) PRIVATE COLLEGE

(2) STATE OR PUBLIC COLLEGE

COLLEGE : V192

--- S3/Q.30 ---

HOW MANY HOURS OF CLASSES WERE YOU TAKING
@2 PER WEEK @ IN [L15]?

HOURS : V193

[SK 0 IF V184<>1 AND V185<>1 AND V189<>1 AND V190<>1 THEN GO TO S3/Q.31]
[CV 0 IF V189=1 OR V190=1 THEN L15="OCTOBER 1982"]
[CV 0 IF V184=1 OR V185=1 THEN L15="MARCH 1983"]

--- S3/Q.31 ---

DO YOU HAVE A JOB @2 NOW? @

(1) YES

(2) NO

JOB : V194

[SK 1 IF V194=1 THEN GO TO S3/Q.32A]

--- S3/Q.32 ---

HAVE YOU @2 EVER @ HAD A FULL-TIME OR PART-TIME JOB?

(1) YES

(2) NO

HAD JOB : V195

[SK 0 IF V181=1 OR V186=1 THEN GO TO S3/Q.32A]

--- S3/Q.32A ---

HOW {L16} YOU FEEL ABOUT {L17}? {L16}
YOU LIKE IT VERY MUCH, LIKE IT SOMEWHAT, DISLIKE IT
SOMEWHAT, OR DISLIKE IT VERY MUCH?

(1) LIKE IT VERY MUCH
(2) LIKE IT SOMEWHAT
(3) DISLIKE IT SOMEWHAT
(4) DISLIKE IT VERY MUCH

FEEL ABOUT: V196

{CV 0 IF V194=1 THEN L16="DO" ELSE L16="DID"}
{CV 0 IF V194=1 THEN L17="THE JOB YOU HAVE NOW" ELSE L17="YOUR LAST JOB"}
{SK 0 IF V181<>1 AND V186<>1 AND V194<>1 AND V195<>1 THEN GO TO S3/Q.34 }

--- S3/Q.33 ---

WHEN DID YOU @2 START @ WORKING AT YOUR {L17} JOB?

(ENTER MONTH AND YEAR)

MONTH : V197
YEAR : V198

{CV 0 IF V194=1 THEN L17="CURRENT" ELSE L17="LAST"}

--- S3/Q.34 ---

WHEN DID YOUR LAST JOB @2 END? @

(ENTER MONTH AND YEAR)

MONTH : V199
YEAR : V200

{SK 0 IF V194=1 OR (V181<>1 AND V186<>1 AND V195<>1) THEN GO TO S3/Q.35}

--- S3/Q.35 ---

HOW MANY HOURS @2 PER WEEK @ {L16} YOU @2 USUALLY @
WORK AT YOUR {L17} JOB@

HOURS : V201

{SK 0 IF V181<>1 AND V186<>1 AND V194<>1 AND V195<>1 THEN GO TO S3/Q.37}

--- S3/Q.36 ---

ABOUT HOW MUCH (L16) YOU EARN @2 PER HOUR @ AT YOUR
(L17) JOB?

(GET BEST GUESS IF NECESSARY)

IF CAN'T ESTIMATE, GET $ PER MONTH @2 AND CODE $ PER HOUR AS "88" @

@2 IF RESPONDENT SAYS MINIMUM WAGE CODE $ PER HOUR AS "1" @

PER HOUR : V203
PER MONTH : V204

(SK 1 IF V203=1 OR (V203<>88 AND V203<>99) THEN GO TO S3/Q.37)

--- S3/Q.37 ---

IN 1982, WHAT WAS YOUR @2 TOTAL @ INCOME BEFORE TAXES?
DID YOU HAVE NO INCOME, SOME INCOME BUT LESS THAN $7,000,
OR WAS IT $7,000 OR MORE?

INCLUDE @2 ALL @ YOUR OWN SALARIES, WAGES, TIPS, COMMISSIONS,
AND INTEREST. DO @2 NOT @ INCLUDE MONEY EARNED BY OTHER
PERSONS, SUCH AS YOUR PARENTS, WIFE, OR OTHER RELATIVES.

(PROBE: PLEASE GIVE ME YOUR BEST GUESS)

(1) NO INCOME IN 1982
(2) LESS THAN $7,000
(3) $7,000 OR MORE

INCOME : V205

(SK 1 IF V205=3 THEN GO TO S3/Q.37B)
(SK 1 IF V205=1 OR V205=88 OR V205=99 THEN GO TO S3/Q.38)
(GO TO S3/Q.38)

--- S3/Q.37A ---

WHICH OF THESE CATEGORIES BEST DESCRIBES YOUR INCOME IN 1982--WAS IT (READ CATEGORIES)?

(1) UNDER $1,500

(2) AT LEAST $1,500 BUT LESS THAN $3,000

(3) AT LEAST $3,000 BUT LESS THAN $5,000, OR

(4) AT LEAST $5,000 BUT LESS THAN $7,000

INCOME : V206

--- S3/Q.37B ---

WHICH OF THESE CATEGORIES BEST DESCRIBES YOUR INCOME IN 1982--WAS IT (READ CATEGORIES)?

(1) AT LEAST $7,000 BUT LESS THAN $9,000

(2) AT LEAST $9,000 BUT LESS THAN $11,000

(3) AT LEAST $11,000 BUT LESS THAN $13,000

(4) AT LEAST $13,000 BUT LESS THAN $15,000, OR

(5) $15,000 OR MORE

INCOME : V207

--- S3/Q.38 ---

DO YOU HAVE A HIGH SCHOOL DIPLOMA OR HAVE YOU EVER PASSED A HIGH SCHOOL EQUIVALENCY OR GED TEST? IF YES, PROBE: WHICH DO YOU HAVE, A HIGH SCHOOL DIPLOMA OR GED?

(1) I HAVE A GED CERTIFICATE.

(2) I HAVE A HIGH SCHOOL DIPLOMA.

(3) I DO NOT HAVE A GED CERTIFICATE OR HIGH SCHOOL DIPLOMA.

SCHOOLING : V208

--- S3/Q.39 ---

AS OF TODAY, WHAT IS THE HIGHEST GRADE OR YEAR OF REGULAR SCHOOL OR COLLEGE THAT YOU HAVE COMPLETED? IF YOU HAVE A GED, PLEASE TELL ME THE @2 LAST GRADE @ YOU COMPLETED IN REGULAR SCHOOL.

(1)	1ST GRADE	(13)	1ST YEAR OF COLLEGE
(2)	2ND GRADE	(14)	2ND YEAR OF COLLEGE (ASSOCIATE'S DEGREE)
(3)	3RD GRADE		
(4)	4TH GRADE	(15)	3RD YEAR OF COLLEGE
(5)	5TH GRADE	(16)	4TH YEAR OF COLLEGE (BACHELOR'S DEGREE)
(6)	6TH GRADE		
(7)	7TH GRADE	(17)	5TH YEAR OF COLLEGE (MASTER'S DEGREE)
(8)	8TH GRADE		
(9)	9TH GRADE	(18)	MORE THAN 5 YEARS OF COLLEGE (LAW DEGREE, PH.D., M.D., LL.D., D.D.S., J.D.)
(10)	10TH GRADE		
(11)	11TH GRADE		
(12)	12TH GRADE		

SCHOOLING : V209

--- S3/Q.40 ---

ARE YOU CURRENTLY IN SCHOOL, OR WHEN DID YOU LAST ATTEND REGULAR SCHOOL?

(1) YES - CURRENTLY IN SCHOOL
(2) NO - NOT CURRENTLY IN SCHOOL

(IF NOT CURRENTLY IN SCHOOL, RECORD MONTH AND YEAR LAST ATTENDED SCHOOL)

CURRENTLY : V210 YEAR : V212
MONTH : V211

[SK 1 IF V210=1 THEN GO TO S3/Q.41]

--- S3/Q.41 ---

DID YOU EVER ATTEND A COLLEGE OR UNIVERSITY?

(1) YES

(2) NO

ATTEND : V213

[SK 0 IF V209<>12 OR V184=1 OR V189=1 THEN GO TO S3/Q.42]

--- S3/Q.42 ---

WHAT IS THE HIGHEST GRADE OR YEAR OF @2 REGULAR @ SCHOOL, THAT IS, HIGH SCHOOL, COLLEGE, OR GRADUATE SCHOOL, THAT YOU WOULD @2 LIKE @ TO COMPLETE?

(1)	1ST GRADE	(13)	1ST YEAR OF COLLEGE
(2)	2ND GRADE	(14)	2ND YEAR OF COLLEGE (ASSOCIATE'S DEGREE)
(3)	3RD GRADE		
(4)	4TH GRADE	(15)	3RD YEAR OF COLLEGE
(5)	5TH GRADE	(16)	4TH YEAR OF COLLEGE (BACHELOR'S DEGREE)
(6)	6TH GRADE		
(7)	7TH GRADE	(17)	5TH YEAR OF COLLEGE (MASTER'S DEGREE)
(8)	8TH GRADE		
(9)	9TH GRADE	(18)	MORE THAN 5 YEARS OF COLLEGE (LAW DEGREE, PH.D., M.D., LL.D., D.D.S., J.D.)
(10)	10TH GRADE		
(11)	11TH GRADE		
(12)	12TH GRADE		

SCHOOLING : V214

--- S3/Q.43A ---

NOT COUNTING REGULAR SCHOOL LIKE HIGH SCHOOL OR COLLEGE, WOULD YOU LIKE TO GET ANY OTHER OCCUPATIONAL OR JOB TRAINING? (INCLUDING MILITARY TRAINING)

(1) YES

(2) NO

TRAINING : V215

--- S3/Q.43C ---

DO YOU PLAN TO GO TO ANY {L22} VOCATIONAL SCHOOL, BUSINESS OR TRADE SCHOOL, OR JOB APPRENTICESHIP PROGRAM IN THE FUTURE?

(1) YES

(2) NO

FUTURE? : V217

{CV 0 IF V60=1 OR V60=2 THEN L22="NONMILITARY" ELSE L22="";
{SK 1 IF V184=1 OR V185=1 THEN GO TO S3/Q.44B}
{SK 1 IF V183<>1 AND V184<>1 AND V185<>1 THEN GO TO S3/Q.44C}

--- S3/Q.44A ---

SUPPOSE YOU WANT TO GO TO COLLEGE OR VOCATIONAL SCHOOL AFTER HIGH SCHOOL. APPROXIMATELY HOW MUCH, CONSIDERING ALL SCHOOL @2 AND LIVING EXPENSES, @ DO YOU THINK IT WILL COST FOR ONE YEAR OF COLLEGE OR VOCATIONAL TRAINING? (READ LIST, REPEAT CATEGORIES, PROBE - FOR BEST GUESS)

(1) UNDER $1,000
(2) AT LEAST $1,000 BUT LESS THAN $2,000
(3) AT LEAST $2,000 BUT LESS THAN $3,000
(4) AT LEAST $3,000 BUT LESS THAN $4,000
(5) AT LEAST $4,000 BUT LESS THAN $5,000, OR
(6) $5,000 OR MORE?

COST : V218

--- S3/Q.44B ---

SUPPOSE YOU WANT TO CONTINUE IN COLLEGE OR VOCATIONAL SCHOOL IN THE FUTURE. APPROXIMATELY HOW MUCH, CONSIDERING ALL SCHOOL @2 AND LIVING EXPENSES, @ DO YOU THINK IT WILL COST FOR ONE YEAR OF COLLEGE OR VOCATIONAL TRAINING? (READ LIST, REPEAT CATEGORIES).
(PROBE - FOR BEST GUESS)

(1) UNDER $1,000
(2) AT LEAST $1,000 BUT LESS THAN $2,000
(3) AT LEAST $2,000 BUT LESS THAN $3,000
(4) AT LEAST $3,000 BUT LESS THAN $4,000
(5) AT LEAST $4,000 BUT LESS THAN $5,000, OR
(6) $5,000 OR MORE?

COST : V219

--- S3/Q.44C ---

SUPPOSE YOU WANT TO GO TO COLLEGE OR VOCATIONAL SCHOOL IN THE FUTURE. APPROXIMATELY HOW MUCH, CONSIDERING ALL SCHOOL @2 AND LIVING EXPENSES, @ DO YOU THINK IT WILL COST FOR ONE YEAR OF COLLEGE OR VOCATIONAL TRAINING? (READ LIST, REPEAT CATEGORIES, PROBE - FOR BEST GUESS)

(1) UNDER $1,000
(2) AT LEAST $1,000 BUT LESS THAN $2,000
(3) AT LEAST $2,000 BUT LESS THAN $3,000
(4) AT LEAST $3,000 BUT LESS THAN $4,000
(5) AT LEAST $4,000 BUT LESS THAN $5,000, OR
(6) $5,000 OR MORE?

COST : V220

--- S3/Q.45 ---

SUPPOSE YOU HAD ENOUGH MONEY OR COULD GET ENOUGH MONEY TO PAY FOR COLLEGE OR VOCATIONAL TRAINING [L17], WOULD YOU SAY. . .(READ CATEGORIES)?

(1) YOU DEFINITELY WOULD ATTEND COLLEGE OR VOCATIONAL TRAINING.

(2) YOU PROBABLY WOULD ATTEND.

(3) YOU PROBABLY WOULD @2 NOT @ ATTEND COLLEGE OR VOCATIONAL TRAINING, OR

(4) YOU DEFINITELY WOULD @2 NOT @ ATTEND.

ATTEND : V221

[CV 0 IF V183=1 THEN L17="AFTER HIGH SCHOOL" ELSE L17="IN THE FUTURE"]

--- S3/Q.46 ---

IF YOU [L17], WHAT KIND OF SCHOOL WILL YOU ATTEND -- A 2-YEAR OR JUNIOR COLLEGE, OR A 4-YEAR COLLEGE OR UNIVERSITY?

(1) 2-YEAR COLLEGE OR JUNIOR COLLEGE

(2) 4-YEAR COLLEGE OR UNIVERSITY

COLLEGE : V222

[CV 0 L17="GO TO COLLEGE IN THE FUTURE"]
[CV 0 IF V183=1 THEN L17="GO TO COLLEGE AFTER HIGH SCHOOL"]
[CV 0 IF V184=1 THEN L17="CONTINUE IN COLLEGE IN THE FUTURE"]
[SK 0 IF V214<=12 AND V217=2 AND V221=4 THEN GO TO S3/Q.51]
[SK 0 IF V221=3 OR V221=4 OR V214<=12 THEN GO TO S3/Q.48]

--- S3/Q.47 ---

WILL YOU GO TO A PRIVATE COLLEGE, OR A STATE OR PUBLIC COLLEGE?

(1) PRIVATE COLLEGE

(2) STATE OR PUBLIC COLLEGE

COLLEGE : V223

--- S3/Q.48 ---

[L19]
[L20] . . .
WHICH [L21] WAYS OF GETTING MONEY TO PAY FOR YOUR EDUCATION WILL BE AVAILABLE TO @Z YOU ? IF YOU GO TO COLLEGE OR VOCATIONAL SCHOOL [L17]? WHAT ABOUT . . . (READ LIST AND MARK YES OR NO FOR EACH ITEM)

(A) A SCHOLARSHIP
(B) GOVERNMENT GRANTS YOU DON'T HAVE TO PAY BACK, SUCH AS BASIC OPPORTUNITY GRANTS.
(C) GOVERNMENT SPONSORED OR SUBSIDIZED LOANS, SUCH AS GUARANTEED STUDENT LOANS
(D) LOANS NOT SPONSORED BY THE GOVERNMENT, SUCH AS BANK OR SCHOOL LOANS.
(E) YOUR OWN SAVINGS OR EARNINGS.
(F) MONEY OR LOANS FROM YOUR FAMILY, SUCH AS YOUR PARENTS, WIFE, OR OTHER RELATIVES.

(1) YES (2) NO

SCHOLAR. : V224 GOV. LOANS: V226 SAVINGS : V228
GRANTS : V225 BANK LOANS: V227 FAMILY : V229

[CV 0 IF V60=1 OR V60=2 THEN L19="IN ADDITION TO ANY MONEY YOU MAY EARN IF THE MILITARY"]
[CV 0 IF V60=1 OR V60=2 THEN L20="IF YOU ENLIST," ELSE L20=""]
[CV 0 IF V60=1 OR V60=2 THEN L21="OTHER" ELSE L21=""]
[CV 0 IF V183=1 THEN L17="AFTER HIGH SCHOOL" ELSE L17="IN THE FUTURE"]

--- S3/Q.49 ---

COMBINING ALL THESE [L22] SOURCES TOGETHER, HOW MUCH OF YOUR YEARLY SCHOOL AND LIVING EXPENSES CAN YOU COVER IF YOU GO TO SCHOOL? WOULD YOU SAY (READ CATEGORIES, REPEAT LIST, PROBE - FOR BEST GUESS IF NECESSARY)

(1) ALL OF YOUR EXPENSES
(2) MORE THAN 3/4
(3) ABOUT 3/4
(4) ABOUT HALF
(5) ABOUT 1/4
(6) LESS THAN 1/4, OR
(7) NONE OF YOUR EXPENSES

EXPENSES : V230

[CV 0 IF V60=1 OR V60=2 THEN L22="NONMILITARY" ELSE L22=""]

--- S3/Q.51 ---

YOU TOLD ME EARLIER THAT AS THINGS STAND NOW, YOU [L5].
NOW, I WANT TO ASK YOU A FEW QUESTIONS ABOUT [L21] THINGS YOU MIGHT [L22] BE DOING IN THE NEXT @2 TWELVE MONTHS. @ HOW LIKELY IS IT THAT YOU WILL BE (READ ITEM) IN THE NEXT 12 MONTHS -- WOULD YOU SAY DEFINITELY, PROBABLY, PROBABLY @2 NOT, @ OR DEFINITELY NOT? (READ LIST)
(A) WORKING AT A FULL-TIME [L6] JOB.
(B) WORKING AT A PART-TIME [L6] JOB.
(C) LOOKING FOR A [L6] JOB.
(D) GOING TO COLLEGE OR VOCATIONAL SCHOOL[L7].

(1) DEFINITELY
(2) PROBABLY
(3) PROBABLY @2 NOT @
(4) DEFINITELY @2 NOT @

FULL-TIME : V232
PART-TIME : V233
LOOKING : V234
SCHOOL : V235

[CV 0 L5="DEFINITELY WILL BE SERVING IN THE MILITARY"]
[CV 0 IF V60=2 THEN L5="PROBABLY WILL BE SERVING IN THE MILITARY"]
[CV 0 IF V60=3 THEN L5="WILL PROBABLY NOT BE SERVING IN THE MILITARY"]
[CV 0 IF V60=4 THEN L5="WILL DEFINITELY NOT BE SERVING IN THE MILITARY"]
[CV 0 IF V60=1 OR V60=2 THEN L6="CIVILIAN" ELSE L6=""]
[CV 0 IF V60=1 OR V60=2 THEN L7="AS A CIVILIAN" ELSE L7=""]
[CV 0 IF V60=1 OR V60=2 THEN L22="ALSO" ELSE L22=""]
[CV 0 IF V60=88 OR V60=99 THEN L5="DON'T KNOW IF YOU WILL BE SERVING IN THE MILITARY"]

--- S3/Q.52 ---

YOU SAID YOU WILL BE WORKING IN THE NEXT 12 MONTHS. DO YOU HAVE A SPECIFIC (LO) JOB ALREADY LINED UP?

(1) HAVE A JOB LINED UP

(2) WILL HAVE TO LOOK FOR A JOB

WORKING : V236

(CV 0 IF V60=1 OR V60=2 THEN LO="CIVILIAN" ELSE LO="")
(SK 0 IF V232<>1 AND V232<>2 AND V233<>1 AND V233<>2 THEN GO TO S3/Q.53)

--- S3/Q.53 ---

HOW EASY OR DIFFICULT DO YOU THINK IT IS FOR SOMEONE LIKE YOU TO GET A FULL-TIME JOB IN THE AREA WHERE YOU NOW LIVE-- WOULD YOU SAY IT IS (READ CATEGORIES)?

(1) ALMOST IMPOSSIBLE,
(2) VERY DIFFICULT,
(3) SOMEWHAT DIFFICULT,
(4) NOT TOO DIFFICULT, OR
(5) NOT DIFFICULT AT ALL?

GET/JOB : V237

--- S3/Q.54A ---

YOU SAID YOU THINK YOU WILL WORK AT A FULL TIME (LO) JOB IN THE NEXT TWELVE MONTHS. HOW MUCH DO YOU THINK YOU WILL EARN @2 PER HOUR? #

(GET BEST GUESS IF NECESSARY)

IF CAN'T ESTIMATE, GET $ PER MONTH @4 AND CODE $ PER HOUR AS "88" #

@2 IF RESPONDENT SAYS MINIMUM WAGE CODE $ PER HOUR AS "1" #

PER HOUR : V239
PER MTH. : V240

(CV 0 IF V60=1 OR V60=2 THEN LO="CIVILIAN" ELSE LO="")
(SK 0 IF V232<>1 AND V232<>2 THEN GO TO S3/Q.54A)
(SK 1 IF V239=1 OR (V239<>88 AND V239<>99) THEN GO TO S3/Q.57)

--- S3/Q.54B ---

IF YOU TOOK A FULL-TIME [L6] JOB IN THE NEXT TWELVE MONTHS, HOW MUCH DO YOU THINK YOU WOULD EARN @2 PER HOUR? @

(GET BEST GUESS IF NECESSARY)

IF CAN'T ESTIMATE, GET $ PER MONTH @2 AND CODE $ PER HOUR AS "88" @

@2 IF RESPONDENT SAYS MINIMUM WAGE CODE $ PER HOUR AS "1" @

PER HOUR : V242
PER MTH. : V243

[SK 1 IF V242=1 OR (V242<>88 AND V242<>99) THEN GO TO S4/Q.57]

--- S4/Q.57 ---

SECTION 4: MILITARY JOBS AND BENEFITS

NOW I HAVE SOME FURTHER QUESTIONS ABOUT MILITARY BENEFITS.

YOU SAID EARLIER THAT YOU THINK THERE IS A PROGRAM THAT PAYS A CASH BONUS FOR ENLISTING. WHICH SERVICE OR SERVICES PAY A CASH BONUS FOR ENLISTING?
(READ EACH SERVICE AND MARK YES OR NO FOR EACH)

(A) ARMY
(B) NAVY
(C) AIR FORCE
(D) MARINE CORPS

(1) YES
(2) NO

ARMY : V244
NAVY : V245
AIR FORCE : V246
MARINES : V247

[SK 0 IF V71<>1 THEN GO TO S4/Q.63A]
[SK 4 IF V244+V245+V246+V247>6 THEN GO TO S4/Q.59]

--- S4/Q.58 ---

WHICH SERVICE PAYS THE BIGGEST CASH ENLISTMENT BONUS, OR DO THEY ALL PAY THE SAME BONUS?

(1) ARMY
(2) NAVY
(3) AIR FORCE
(4) MARINE CORPS
(5) ALL PAY THE SAME BONUS.

BIGGEST : V248

--- S4/Q.59 ---

HOW MUCH IS THE BIGGEST CASH BONUS A PERSON CAN GET FOR ENLISTING?

(IF NECESSARY, ASK: PLEASE GIVE ME YOUR BEST GUESS.)

BIGGEST : V249

--- S4/Q.59B ---

WHEN DOES A PERSON RECIEVE THE BONUS?

(READ CATEGORIES)

(1) WHEN HE SIGNS AN ENLISTMENT CONTRACT,

(2) WHEN HE COMPLETES BASIC TRAINING,

(3) WHEN HE COMPLETES TRAINING FOR A SPECIFIC JOB OR

(4) WHEN HE COMPLETES HIS FIRST TERM.

RECEIVE : V251

--- S4/Q.60 ---

IS A CASH ENLISTMENT BONUS AVAILABLE FOR ALL JOBS OR DO ONLY SOME JOBS QUALIFY FOR A BONUS?

(1) ALL JOBS

(2) ONLY SOME JOBS

BONUS : V252

[CV 1 IF V252=2 THEN L17="ALL JOBS THAT OFFER A BONUS" ELSE L17="ALL JOBS"]

--- S4/Q.60B ---

IS THE SAME ENLISTMENT BONUS PROGRAM AVAILABLE FOR (L17) , OR DO SOME JOBS QUALIFY FOR #2 LARGER BONUSES @ ?

(1) SAME FOR ALL JOBS
(2) LARGER FOR SOME JOBS

ALL JOBS : V254

[SK 1 IF V19<>1 THEN GO TO S4/Q.61A]

--- S4/Q.60C ---

CAN A PERSON GET A CASH ENLISTMENT BONUS IF HE ENLISTS FOR THREE YEARS IN THE ARMY OR MUST HE ENLIST FOR FOUR YEARS?

(1) CAN GET BONUS FOR 3 YEARS

(2) MUST ENLIST FOR 4 YEARS

ENLIST : V255

[SK 0 IF V19<>1 THEN GO TO S4/Q.61A]
[SK 0 IF V244<>1 THEN GO TO S4/Q.61A]
[SK 1 IF V255<>1 THEN GO TO S4/Q.61A]

--- S4/Q.60D ---

WHAT IS THE MAXIMUM CASH BONUS FOR ENLISTING FOR THREE YEARS IN THE ARMY?

MAXIMUM : V256

--- S4/Q.61A ---

DID YOU GET INFORMATION ABOUT THE ENLISTMENT BONUS PROGRAM FROM (READ EACH SOURCE AND MARK "YES" AND "NO")?

(A) ADVERTISING ON THE RADIO
(B) ADVERTISING ON TELEVISION
(C) MAGAZINES
(D) NEWSPAPER

(1) YES

(2) NO

RADIO : V257 MAGAZINES : V259
T. .V. : V258 NEWSPAPER : V260

--- S4/Q.61E ---

DID YOU GET INFORMATION ABOUT THE ENLISTMENT BONUS PROGRAM FROM . . .

(E) MILITARY RECRUITERS
(F) MILITARY JOB COUNSELORS
(G) PARENTS, RELATIVES, OR FRIENDS
(H) MATERIALS YOU RECEIVED IN THE MAIL
(I) SOME OTHER SOURCE

(1) YES

(2) NO

RECRUITER : V261 PARENTS : V263 OTHER : V265
COUNSELOR : V262 MAIL : V264

(SR 5 IF V87+V88+V89+V90>6 THEN GO TO S4/Q.63)

--- S4/Q.62 ---

DID YOU TALK TO MORE THAN ONE SERVICE SPECIFICALLY TO FIND OUT IF THEY OFFERED DIFFERENT ENLISTMENT BONUSES?

(1) YES

(2) NO

TALK TO : V266

--- S4/Q.63 ---

HOW IMPORTANT IS THE CASH ENLISTMENT BONUS PROGRAM IN YOUR THINKING ABOUT ENLISTMENT--IS THE BONUS PROGRAM EXTREMELY IMPORTANT, VERY IMPORTANT, SOMEWHAT IMPORTANT, NOT TOO IMPORTANT, OR NOT IMPORTANT AT ALL IN YOUR THINKING ABOUT WHETHER TO ENLIST?

(1) EXTREMELY IMPORTANT
(2) VERY IMPORTANT
(3) SOMEWHAT IMPORTANT
(4) NOT TOO IMPORTANT
(5) NOT IMPORTANT AT ALL

PROGRAM : V267

--- S4/Q.63A ---

NOW, I HAVE SOME FURTHER QUESTIONS ABOUT MILITARY BENEFITS.

SUPPOSE THE MILITARY HAD A PROGRAM THAT PAID A CASH BONUS FOR ENLISTING. HOW IMPORTANT WOULD THAT BONUS PROGRAM BE IN YOUR THINKING ABOUT ENLISTMENT--WOULD THE BONUS PROGRAM BE EXTREMELY IMPORTANT, VERY IMPORTANT, SOMEWHAT IMPORTANT, NOT TOO IMPORTANT, OR NOT IMPORTANT AT ALL IN YOUR THINKING ABOUT WHETHER TO ENLIST?

(1) EXTREMELY IMPORTANT
(2) VERY IMPORTANT
(3) SOMEWHAT IMPORTANT
(4) NOT TOO IMPORTANT
(5) NOT IMPORTANT AT ALL

PROGRAM : V268

--- S4/Q.64 ---

IF YOU WERE ELIGIBLE TO RECEIVE A $5,000 ENLISTMENT BONUS, WOULD YOU @2 MAINLY @ USE IT TO PAY FOR SOMETHING NOW, OR TO SAVE IT FOR LATER?

(1) TO PAY FOR SOMETHING NOW

(2) TO SAVE IT FOR LATER

USE BONUS : V269

(CV 1 IF V269=2 THEN L17="SAVE" ELSE L17="USE")

--- S4/Q.64A ---

WHAT WOULD YOU @2 MAINLY @ [L17] IT FOR?

(READ CATEGORIES AND MARK ONE)

(1) TO BUY SOMETHING, LIKE A TV, STEREO, OR CAR
(2) TO PAY FOR HOUSING OR FOOD
(3) TO PAY FOR COLLEGE OR VOCATIONAL SCHOOL
(4) TO PAY FOR SOME OTHER PERSONAL OR FAMILY EXPENSE, OR
(5) FOR SOMETHING ELSE? (SPECIFY)

USE/SAVE : V270
SPECIFY : V271

(SA 1 IF V270<>5 THEN GO TO S4/Q.65A)

--- S4/Q.65A ---

NOW, LET'S TALK ABOUT MILITARY EDUCATIONAL BENEFITS.

YOU SAID EARLIER THAT YOU THINK THERE IS A PROGRAM THAT HELPS PAY FOR COLLEGE OR VOCATIONAL TRAINING AFTER YOU LEAVE THE MILITARY. WHICH SERVICE OR SERVICES OFFER A PROGRAM THAT HELPS PAY FOR COLLEGE OR VOCATIONAL TRAINING @2 AFTER @ YOU LEAVE THE MILITARY? (READ EACH SERVICE AND MARK "YES" OR "NO".)

(A) ARMY
(B) NAVY
(C) AIR FORCE
(D) MARINE CORPS

(1) YES
(2) NO

ARMY : V272
NAVY : V273
AIR FORCE : V274
MARINES : V275

[SK 0 IF V72<>1 THEN GO TO S4/Q.70]

--- S4/Q.66 ---

WHICH SERVICE OFFERS THE BIGGEST AFTER-SERVICE EDUCATIONAL BENEFIT, OR DO THEY ALL OFFER THE SAME BENEFIT?

(1) ARMY
(2) NAVY
(3) AIR FORCE
(4) MARINE CORPS
(5) ALL OFFER THE SAME BENEFIT

BIGGEST : V276

[SK 0 IF V272+V273+V274+V275>6 THEN GO TO S4/Q.66A]

--- S4/Q.66A ---

DOES THE GOVERNMENT PAY ALL THE MONEY FOR THE AFTER-SERVICE EDUCATION PROGRAM, OR DOES THE ENLISTEE CONTRIBUTE SOME AND THE GOVERNMENT CONTRIBUTE THE REST?

(1) GOVERNMENT PAYS ALL THE MONEY

(2) BOTH THE GOVERNMENT AND ENLISTEE CONTRIBUTE.

PAYS : V277

--- S4/Q.67 ---

IF SOMEONE ENLISTS FOR FOUR YEARS, WHAT IS THE MAXIMUM AMOUNT OF MONEY HE CAN RECEIVE UNDER THIS EDUCATION PROGRAM (L17)?

(BEST GUESS IF NECESSARY)

MAXIMUM : V278

(CV 0 IF V277=2 THEN L17="INCLUDING WHAT HE CONTRIBUTES" ELSE L17="")
(SK 1 IF V277<>2 OR V278=88 OR V278=99 THEN GO TO S4/Q.68A)

--- S4/Q.67A ---

HOW MUCH MONEY DOES AN ENLISTEE HAVE TO CONTRIBUTE TO GET THE (V278)?

ENLISTEE : V279

--- S4/Q.68A ---

CAN AN ENLISTEE SIGN UP FOR BOTH THE ENLISTMENT BONUS PROGRAM AND THE EDUCATIONAL BENEFIT PROGRAM, OR MUST HE CHOOSE BETWEEN THE TWO PROGRAMS?

(1) CAN SIGN UP FOR BOTH

(2) MUST CHOOSE

PROGRAMS : V280

(SK 0 IF V71<>1 OR V72<>1 THEN GO TO S4/Q.68B)

--- S4/Q.68B ---

IS THE EDUCATIONAL BENEFIT PROGRAM THAT HELPS PAY FOR COLLEGE OR VOCATIONAL TRAINING AFTER YOU LEAVE THE MILITARY AVAILABLE FOR @2 ALL @ JOBS, OR DO @2 ONLY @ @2 SOME @ JOBS QUALIFY FOR THE PROGRAM?

(1) ALL JOBS

(2) ONLY SOME JOBS

AVAILABLE : V281

--- S4/Q.68D ---

IS THE SAME AFTER-SERVICE EDUCATIONAL BENEFIT PROGRAM AVAILABLE FOR [L17],
OR DO SOME JOBS QUALIFY FOR @2 LARGER EDUCATIONAL @ @2 BENEFITS? @

(1) SAME FOR ALL JOBS

(2) LARGER FOR SOME JOBS

BENEFITS : V283

[CV 0 IF V281=2 THEN L17="ALL JOBS THAT OFFER EDUCATIONAL BENEFITS" ELSE L17= "ALL JOBS"]

--- S4/Q.68E ---

CAN PERSONS WHO ENLIST IN THE ARMY FOR @2 LESS THAN FOUR @ @2 YEARS @ SIGN UP FOR THE EDUCATIONAL BENEFIT PROGRAM THAT HELPS PAY FOR COLLEGE OR VOCATIONAL TRAINING @2 AFTER @ THEY LEAVE THE MILITARY?

(1) YES

(2) NO

SIGN UP : V284

[SK 0 IF V19<>1 THEN GO TO S4/Q.68H]
[SK 0 IF V272<>1 THEN GO TO S4/Q.68H]
[SK 1 IF V284<>1 THEN GO TO S4/Q.68H]

--- S4/Q.68F ---

UNDER THE EDUCATIONAL BENEFIT PROGRAM, WHAT IS THE MAXIMUM AMOUNT OF MONEY SOMEONE CAN GET FOR A #2 TWO-YEAR @ ENLISTMENT IN THE ARMY (L17)?

(BEST GUESS IF NECESSARY)

MAXIMUM : V285

(CV 0 IF V277=2 THEN L17="INCLUDING WHAT HE CONTRIBUTES HIMSELF" ELSE L17="")

--- S4/Q.68G ---

WHAT IS THE MAXIMUM AMOUNT OF MONEY HE CAN GET FOR A #2 THREE-YEAR @ ENLISTMENT IN THE ARMY (L17)?

(BEST GUESS IF NECESSARY)

MAXIMUM : V286

--- S4/Q.68H ---

DID YOU TALK TO MORE THAN ONE SERVICE SPECIFICALLY TO FIND OUT IF THEY OFFERED DIFFERENT EDUCATIONAL BENEFITS FOR YOU TO USE AFTER LEAVING THE MILITARY?

(1) YES

(2) NO

ED BENEF. : V287

(SK 0 IF V87+V88+V89+V90>6 THEN GO TO S4/Q.69)

--- S4/Q.69 ---

HOW IMPORTANT IS THE AFTER-SERVICE EDUCATION PROGRAM IN YOUR THINKING ABOUT ENLISTMENT--IS THE EDUCATION PROGRAM EXTREMELY IMPORTANT, VERY IMPORTANT, SOMEWHAT IMPORTANT, NOT TOO IMPORTANT, OR NOT IMPORTANT AT ALL IN YOUR THINKING ABOUT WHETHER TO ENLIST?

(1) EXTREMELY IMPORTANT
(2) VERY IMPORTANT
(3) SOMEWHAT IMPORTANT
(4) NOT TOO IMPORTANT
(5) NOT IMPORTANT AT ALL

PROGRAM : V288

--- S4/Q.70 ---

NOW, LET'S TALK ABOUT MILITARY EDUCATIONAL BENEFITS.

SUPPOSE THE MILITARY HAD A PROGRAM THAT WOULD HELP PAY FOR COLLEGE OR VOCATIONAL TRAINING AFTER YOU LEAVE THE SERVICE. HOW IMPORTANT WOULD THAT EDUCATION PROGRAM BE IN YOUR THINKING ABOUT ENLISTMENT -- WOULD THE EDUCATION PROGRAM BE EXTREMELY IMPORTANT, VERY IMPORTANT, SOMEWHAT IMPORTANT, NOT TOO IMPORTANT, OR NOT IMPORTANT AT ALL IN YOUR THINKING ABOUT WHETHER TO ENLIST?

(1) EXTREMELY IMPORTANT
(2) VERY IMPORTANT
(3) SOMEWHAT IMPORTANT
(4) NOT TOO IMPORTANT
(5) NOT IMPORTANT AT ALL

PROGRAM : V289

--- S4/Q.73A ---

NEAT, I'M GOING TO READ YOU A LIST OF SPECIAL BENEFITS THE SERVICES MIGHT OFFER TO ENLISTEES IN THE NEAR FUTURE.

BEFORE I BEGIN, LET ME ASK YOU, AS THINGS STAND NOW, HOW LIKELY IS IT THAT YOU WILL ENLIST FOR FOUR YEARS OF ACTIVE DUTY?

WOULD YOU SAY YOU . . . (READ LIST)

(1) DEFINITELY WILL SERVE
(2) PROBABLY WILL SERVE
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE?

FOUR YRS : V290

--- S4/Q.73B ---

SUPPOSE YOU CAN GET A CASH BONUS OF $5,000 TO ENLIST FOR FOUR YEARS OF ACTIVE DUTY. YOU WILL RECEIVE THE BONUS AFTER COMPLETING JOB TRAINING.
HOW LIKELY IS IT THAT YOU WILL ENLIST FOR FOUR YEARS? WOULD YOU SAY YOU . . .

(1) DEFINITELY WILL SERVE,
(2) PROBABLY WILL SERVE,
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE.

$5000 : V291

--- S4/Q.73B1 ---

NOW, SUPPOSE INSTEAD THAT YOU CAN GET A CASH BONUS OF $5,000 TO ENLIST FOR FOUR YEARS OF ACTIVE DUTY. YOU WILL RECEIVE THE BONUS AFTER COMPLETING JOB TRAINING. HOW LIKELY IS IT THAT YOU WILL ENLIST FOR FOUR YEARS? WOULD YOU SAY YOU . . .

(1) DEFINITELY WILL SERVE,
(2) PROBABLY WILL SERVE,
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE.

$5000 : V391

--- S4/Q.73C ---

SUPPOSE THE BONUS IS $8,000 FOR FOUR YEARS OF ACTIVE DUTY. HOW LIKELY IS IT THAT YOU WILL ENLIST FOR FOUR YEARS? WOULD YOU SAY YOU . ..

(1) DEFINITELY WILL SERVE,
(2) PROBABLY WILL SERVE,
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE.

$8000 : V292

[SK 0 IF V291=1 THEN GO TO S4/Q.73E]

--- S4/Q.73C1 ---

SUPPOSE THE BONUS IS $8,000 FOR FOUR YEARS OF ACTIVE DUTY. HOW LIKELY IS IT THAT YOU WILL ENLIST FOR FOUR YEARS? WOULD YOU SAY YOU . ..

(1) DEFINITELY WILL SERVE,
(2) PROBABLY WILL SERVE,
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE.

$8000 : V392

[SK 0 IF V391=1 THEN GO TO S4/Q.73H]

--- S4/Q.73D ---

SUPPOSE THE BONUS IS $15,000 FOR FOUR YEARS OF ACTIVE DUTY.
HOW LIKELY IS IT THAT YOU WILL ENLIST FOR FOUR YEARS?

WOULD YOU SAY YOU . . .

(1) DEFINITELY WILL SERVE,
(2) PROBABLY WILL SERVE,
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE.

$15000 : V293

(SR 0 IF V292=1 THEN GO TO S4/Q.73E)

--- S4/Q.73D1 ---

SUPPOSE THE BONUS IS $15,000 FOR FOUR YEARS OF ACTIVE DUTY.
HOW LIKELY IS IT THAT YOU WILL ENLIST FOR FOUR YEARS?

WOULD YOU SAY YOU . . .

(1) DEFINITELY WILL SERVE,
(2) PROBABLY WILL SERVE,
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE.

$15000 : V393

(SR 0 IF V392=1 THEN GO TO S4/Q.73H)

--- S4/Q.73E ---

NOW, SUPPOSE INSTEAD THAT THE SERVICE WILL
HELP YOU PAY FOR SCHOOL @2 AFTER @ YOU LEAVE THE
MILITARY. WHAT IF YOU CAN GET $8,000 FOR COLLEGE OR
VOCATIONAL SCHOOL IF YOU ENLIST FOR FOUR YEARS OF ACTIVE
DUTY. THE BENEFIT IS PAID WHEN YOU ATTEND SCHOOL AFTER
LEAVING THE MILITARY. UNDER THIS PROGRAM, HOW LIKELY IS IT
THAT YOU WILL ENLIST FOR FOUR YEARS?
WOULD YOU SAY YOU . . .

(1) DEFINITELY WILL SERVE,
(2) PROBABLY WILL SERVE,
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE.

$8000 AFT.: V294

--- S4/0.73E1 ---

SUPPOSE THAT THE SERVICE WILL HELP YOU PAY FOR SCHOOL
@2 AFTER @ YOU LEAVE THE MILITARY. WHAT IF YOU CAN
GET $8,000 FOR COLLEGE OR VOCATIONAL SCHOOL IF YOU
ENLIST FOR FOUR YEARS OF ACTIVE DUTY. THE BENEFIT IS
PAID WHEN YOU ATTEND SCHOOL AFTER LEAVING THE MILITARY.
UNDER THIS PROGRAM, HOW LIKELY IS IT THAT YOU WILL
ENLIST FOR FOUR YEARS?
WOULD YOU SAY YOU . . .

(1) DEFINITELY WILL SERVE,
(2) PROBABLY WILL SERVE,
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE.

$8000 AFL.: V394

--- S4/0.73F ---

SUPPOSE THE BENEFIT FOR COLLEGE OR VOCATIONAL SCHOOL
IS $15,000 AFTER FOUR YEARS OF ACTIVE DUTY.
HOW LIKELY IS IT THAT YOU WILL ENLIST FOR FOUR YEARS?
WOULD YOU SAY YOU . . .

(1) DEFINITELY WILL SERVE,
(2) PROBABLY WILL SERVE,
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE.

$15,000 : V295

ISR 0 IF V294=1 THEN GO TO S4/0.73H4

--- S4/0.73F1 ---

SUPPOSE THE BENEFIT FOR COLLEGE OR VOCATIONAL SCHOOL
IS $15,000 AFTER FOUR YEARS OF ACTIVE DUTY.
HOW LIKELY IS IT THAT YOU WILL ENLIST FOR FOUR YEARS?
WOULD YOU SAY YOU . . .

(1) DEFINITELY WILL SERVE,
(2) PROBABLY WILL SERVE,
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE.

$15,000 : V395

--- S4/Q.73G ---

SUPPOSE THE BENEFIT FOR COLLEGE OR VOCATIONAL SCHOOL IS $23,000 AFTER FOUR YEARS OF ACTIVE DUTY. HOW LIKELY IS IT THAT YOU WILL ENLIST FOR FOUR YEARS? WOULD YOU SAY YOU . . .

(1) DEFINITELY WILL SERVE,
(2) PROBABLY WILL SERVE,
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE.

$23,000 : V296

[SK Q IF V295=1 THEN GO TO S4/Q.73H]

--- S4/Q.73G1 ---

SUPPOSE THE BENEFIT FOR COLLEGE OR VOCATIONAL SCHOOL IS $23,000 AFTER FOUR YEARS OF ACTIVE DUTY. HOW LIKELY IS IT THAT YOU WILL ENLIST FOR FOUR YEARS? WOULD YOU SAY YOU . . .

(1) DEFINITELY WILL SERVE,
(2) PROBABLY WILL SERVE,
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE.

$23,000 : V396

[SK Q IF V395=1 THEN GO TO S4/Q.73H]

--- S4/Q.73H ---

YOU SAID THAT AS THINGS STAND NOW YOU (DO) ENLIST FOR FOUR YEARS.
SUPPOSE YOU CAN GET A CASH BONUS OF $8,000 IF YOU ENLIST
FOR FOUR YEARS OF ACTIVE DUTY--$5,000 AFTER
YOU COMPLETE YOUR JOB TRAINING AND $3,000 IN INSTALLMENTS
DURING THE FOLLOWING YEAR. UNDER THIS PROGRAM, HOW LIKELY
IS IT THAT YOU WILL ENLIST FOR FOUR YEARS?
WOULD YOU SAY YOU . . .

(1) DEFINITELY WILL SERVE,
(2) PROBABLY WILL SERVE,
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE.

INSTALL. : V297

(CV 0 L5="DEFINITELY WILL")
(CV 0 IF V290=2 THEN L5="PROBABLY WILL")
(CV 0 IF V290=3 THEN L5="WILL PROBABLY NOT")
(CV 0 IF V290=4 THEN L5="WILL DEFINITELY NOT")
(CV 0 IF V290=88 OR V290=99 THEN L5="DON'T KNOW IF YOU WILL")

--- S4/Q.73I ---

ANOTHER POSSIBLE PROGRAM GIVES YOU A CASH ENLISTMENT
BONUS WHOSE VALUE DEPENDS ON THE NUMBER OF YEARS YOU
SIGN UP FOR -- $5,000 IF YOU ENLIST FOR THREE YEARS OF
ACTIVE DUTY OR $8,000 IF YOU ENLIST FOR FOUR YEARS.
UNDER THIS PROGRAM, HOW LIKELY IS IT THAT YOU WILL ENLIST
FOR #2 THREE OR FOUR YEARS? @ WOULD YOU SAY YOU ...

(1) DEFINITELY WILL SERVE
(2) PROBABLY WILL SERVE,
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE.

YRS. BON. : V298

--- S4/Q.73J ---

[L2] [L3] YOU SELECT
THE THREE-YEAR $4,000 PLAN OR THE FOUR-YEAR
$8,000 PLAN?

(1) THREE YEAR -- $4,000 PLAN

(2) FOUR YEAR -- $8,000 PLAN

SELECT : V299

[CV 0 IF V298>=3 THEN L2="IF YOU DID SIGN UP FOR THIS OPTION," ELSE L2=""]
[CV 0 IF V298>=3 THEN L3="WOULD" ELSE L3="WILL"]

--- S4/Q.73K ---

NOW, SUPPOSE INSTEAD THAT IF YOU ENLIST FOR FOUR YEARS OF
ACTIVE DUTY YOUR #2 STARTING PAY # IS INCREASED
BY 10 PERCENT, ABOUT $60 MORE PER MONTH TO START.
HOW LIKELY IS IT THAT YOU WILL ENLIST FOR FOUR YEARS?
WOULD YOU SAY YOU . . .

(1) DEFINITELY WILL SERVE,
(2) PROBABLY WILL SERVE,
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE.

PAY INC. : V300

--- S4/Q.73L ---

FINALLY, UNDER ANOTHER POSSIBLE PROGRAM, YOU CAN ADVANCE
TWO EXTRA PAY GRADES AND EARN AN EXTRA $100 PER MONTH TO
START IF YOU ENLIST FOR FOUR YEARS OF ACTIVE DUTY.
TO QUALIFY FOR THE PROGRAM, YOU MUST HAVE CIVILIAN
EXPERIENCE RELATED TO THE MILITARY JOB YOU TAKE, EITHER
TWO YEARS OF WORK EXPERIENCE, OR ONE YEAR OF WORK AND
THREE SEMESTERS OF COLLEGE OR VOCATIONAL SCHOOL. UNDER
THIS PROGRAM, HOW LIKELY IS IT THAT YOU WILL ENLIST
FOR FOUR YEARS?
WOULD YOU SAY YOU . . .

(1) DEFINITELY WILL SERVE,
(2) PROBABLY WILL SERVE,
(3) PROBABLY WILL NOT SERVE, OR
(4) DEFINITELY WILL NOT SERVE.

XTRA GRDS.: V301

--- S5/Q.74 ---

SECTION 5: INDIVIDUAL AND FAMILY BACKGROUND

NOW I HAVE A FEW LAST QUESTIONS TO HELP US COMPARE YOUR ANSWERS WITH THOSE OF OTHER PEOPLE WHO TAKE PART IN THIS SURVEY. PLEASE REMEMBER, THIS INFORMATION WILL BE KEPT PRIVATE AND WILL NEVER BE USED WITH YOUR NAME.

WHAT IS YOUR BIRTH DATE?

(EXAMPLE : JUNE 18,1952 = 06 18 52)

MONTH : V302 YEAR : V304
DAY : V303

--- S5/Q.75 ---

WHAT DO YOU CONSIDER TO BE YOUR MAIN RACIAL OR ETHNIC GROUP? (PROBE IF NECESSARY: WHAT DO YOU THINK OF AS YOUR #2 MAIN RACIAL OR ETHNIC GROUP, SUCH AS (READ CATEGORIES)?

(1) AMERICAN INDIAN OR ALASKAN NATIVE
(2) ASIAN OR PACIFIC ISLANDER (INCLUDES: CHINESE, JAPANESE, FILIPINO, KOREAN, VIETNAMESE, PACIFIC ISLANDER, ASIAN INDIAN, OR OTHER ASIAN)
(3) BLACK, AFRICAN, AFRO-AMERICAN, OR NEGRO
(4) HISPANIC OR SPANISH (INCLUDES: MEXICAN, MEXICAN-AMERICAN, CHICANO, CUBAN, PUERTO RICAN, LATINO, HISPANIC, OR SPANISH DESCENT)
(5) WHITE OR CAUCASIAN

RACE : V305

(SR 1 IF V305=4 THEN GO TO S5/Q.76)

--- S5/Q.75A ---

DO YOU CONSIDER YOURSELF TO BE OF HISPANIC OR SPANISH BACKGROUND?

(1) YES, HISPANIC OR SPANISH BACKGROUND

(2) NO, NOT HISPANIC OR SPANISH BACKGROUND

CONSIDER : V306

--- S5/Q.76 ---

WHAT IS YOUR CURRENT MARITAL STATUS? PROBE: ARE YOU MARRIED, WIDOWED, DIVORCED, SEPARATED, OR HAVE YOU NEVER BEEN MARRIED?

(1) MARRIED
(2) WIDOWED
(3) DIVORCED
(4) SEPARATED
(5) NEVER MARRIED

MARITAL : V307

--- S5/Q.77 ---

DO YOU HAVE ANY CHILDREN?

(1) YES

(2) NO

CHILDREN : V308

(SR 1 IF V306<>1 THEN GO TO S5/Q.78)

--- S5/Q.77A ---

HOW MANY CHILDREN DO YOU HAVE?

HOW MANY : V309

--- S5/6.78 ---

WHAT IS THE HIGHEST GRADE OR YEAR OF REGULAR SCHOOL OR COLLEGE THAT YOUR #2 FATHER @ OR MALE GUARDIAN COMPLETED AND GOT CREDIT FOR? (PROBE FOR BEST GUESS)

(00)	NO FORMAL SCHOOLING		
(1)	1ST GRADE	(13)	1ST YEAR OF COLLEGE
(2)	2ND GRADE	(14)	2ND YEAR OF COLLEGE
(3)	3RD GRADE		(ASSOCIATE'S DEGREE)
(4)	4TH GRADE	(15)	3RD YEAR OF COLLEGE
(5)	5TH GRADE	(16)	4TH YEAR OF COLLEGE
(6)	6TH GRADE		(BACHELOR'S DEGREE)
(7)	7TH GRADE	(17)	5TH YEAR OF COLLEGE
(8)	8TH GRADE		(MASTER'S DEGREE)
(9)	9TH GRADE	(18)	MORE THAN 5 YEARS OF COLLEGE
(10)	10TH GRADE		(LAW DEGREE, PH.D., M.D.,
(11)	11TH GRADE		LL.D., D.D.S., J.D.)
(12)	12TH GRADE		

FATHER : V310

--- S5/6.79 ---

WHAT IS THE HIGHEST GRADE OR YEAR YOUR #2 MOTHER @ OR FEMALE GUARDIAN COMPLETED? (PROBE FOR BEST GUESS)

(00)	NO FORMAL SCHOOLING		
(1)	1ST GRADE	(13)	1ST YEAR OF COLLEGE
(2)	2ND GRADE	(14)	2ND YEAR OF COLLEGE
(3)	3RD GRADE		(ASSOCIATE'S DEGREE)
(4)	4TH GRADE	(15)	3RD YEAR OF COLLEGE
(5)	5TH GRADE	(16)	4TH YEAR OF COLLEGE
(6)	6TH GRADE		(BACHELOR'S DEGREE)
(7)	7TH GRADE	(17)	5TH YEAR OF COLLEGE
(8)	8TH GRADE		(MASTER'S DEGREE)
(9)	9TH GRADE	(18)	MORE THAN 5 YEARS OF COLLEGE
(10)	10TH GRADE		(LAW DEGREE, PH.D., M.D.,
(11)	11TH GRADE		LL.D., D.D.S., J.D.)
(12)	12TH GRADE		

MOTHER : V311

--- S5/Q.80 ---

WHO ARE YOU LIVING WITH NOW? INCLUDE ANY BROTHERS OR SISTERS WHO LIVE IN YOUR HOME BUT ARE NOW AWAY AT SCHOOL. (PROBE: ANYONE ELSE?)

(1) I LIVE ALONE
(2) MY FATHER
(3) OTHER MALE GUARDIAN (STEP-FATHER OR FOSTER FATHER)
(4) MY MOTHER
(5) OTHER FEMALE GUARDIAN (STEP-MOTHER OR FOSTER MOTHER)
(6) BROTHER(S) AND/OR SISTER(S)
(7) GRANDPARENT(S)
(8) MY WIFE
(9) OTHER RELATIVE(S) (CHILDREN OR ADULTS)
(10) NON-RELATIVE(S) (CHILDREN OR ADULTS)
(11) MY CHILD OR MY CHILDREN

ANS. 1 : V312 ANS. 3 : V314 ANS. 5 : V316 ANS. 7 : V318
ANS. 2 : V313 ANS. 4 : V315 ANS. 6 : V317 ANS. 8 : V319

--- S5/Q.81 ---

HOW MANY BROTHERS AND SISTERS DO YOU HAVE? INCLUDE STEP-BROTHERS AND STEP-SISTERS.

BROTHERS : V320
SISTERS : V321

--- S5/Q.82 ---

HAS YOUR FATHER OR MALE GUARDIAN EVER SERVED ON ACTIVE DUTY IN THE MILITARY?

(1) YES

(2) NO

SERVED : V322

[SR 1 IF V320=0 AND V321=0 THEN GO TO S5/Q.84]

--- S5/Q.83 ---

HAVE ANY OF YOUR BROTHERS OR SISTERS EVER SERVED ON ACTIVE DUTY IN THE MILITARY?

(1) YES

(2) NO

SERVED : V323

--- S5/Q.84 ---

FOR ALL OF 1982, WHAT WOULD YOU SAY WAS THE @2 TOTAL INCOME @ OF YOUR PARENTS OR GUARDIANS AND ALL FAMILY MEMBERS WHO LIVED WITH THEM, BEFORE TAXES AND OTHER DEDUCTIONS? PLEASE DO @2 NOT @ INCLUDE YOUR OWN INCOME. WAS IT (READ CATEGORIES, REPEAT LIST, PROBE FOR BEST GUESS)?

(1) UNDER $8,000
(2) AT LEAST $8,000 BUT LESS THAN $10,000
(3) AT LEAST $10,000 BUT LESS THAN $15,000
(4) AT LEAST $15,000 BUT LESS THAN $20,000
(5) AT LEAST $20,000 BUT LESS THAN $25,000
(6) AT LEAST $25,000 BUT LESS THAN $35,000 OR
(7) $35,000 OR MORE

INCOME : V324

--- S5/Q.85 ---

FINALLY, COULD YOU TELL ME THE ZIP CODE OF THE PLACE WHERE YOU LIVE NOW?

*****

THAT'S THE END OF THE INTERVIEW. THANK YOU VERY MUCH FOR YOUR TIME. WE REALLY APPRECIATE YOUR PARTICIPATION IN THIS IMPORTANT STUDY.

ZIP CODE : V325

Appendix C

SUPPLEMENTAL DATA FOR HIGH QUALITY APPLICANTS AND RESULTS FOR LOW QUALITY APPLICANTS

This appendix presents additional data relevant to the analyses discussed in the body of the report and provides results of interest for the low quality applicants.

Table C.1 shows the regression coefficients, their standard errors, the variable means, and their standard deviations for the logit analysis of high aptitude high school seniors presented in Table 3.1. Table C.2 presents the covariance matrix for the analysis. Similarly, Tables C.3 and C.4 present the corresponding information for the analysis of high aptitude high school graduates presented in Table 3.4.

The remainder of the appendix summarizes the results for low quality applicants.[1] Figure C.1 shows the one-year enlistment status of the low aptitude applicants. Not surprisingly, a substantial proportion (approximately 25 percent) of these applicants did not pass the written aptitude test. Another 30 percent of the low aptitude applicants dropped out of the enlistment process before taking the physical examination. Dropouts at each subsequent stage were relatively rare, however.

Table C.5 presents the results of the logit analysis for low aptitude high school students. Among these applicants, blacks were more likely to enlist. Applicants in AFQT category IV were much less likely to enlist than those in AFQT category IIIB, probably a reflection of service admission policies. In contrast to the high aptitude high school seniors, the educational plans of the low aptitude high school students did not influence their enlistment decisions.

Table C.6 presents the predicted enlistment rate of low aptitude applicants in high school at various points in the distribution of predicted scores. As for high aptitude applicants, there is a wide dispersion of predicted enlistment rates. Table C.7 shows the regression coefficients, their standard errors, the variable means and their standard deviations for the logit analysis of low aptitude high school students presented in Table C.5. The covariance matrix is shown in Table C.8.

[1]These individuals are (1) high school dropouts or (2) high school seniors or graduates scoring below the 50th percentile on the AFQT.

Table C.9 presents the results of the regression analysis for low aptitude respondents not in high school. Again, more capable individuals appear to have been more likely to pass the services' admission standards. Thus, those with AFQT scores in categories I-IIIA enlisted more frequently than those with lower scores, and individuals with high school diplomas were much more likely to enlist than applicants without diplomas. For the approximately 12 percent of the applicants attending college, a wish to acquire vocational training encouraged enlistment. Similarly, individuals who discussed in-service training opportunities with a recruiter enlisted more frequently than those who did not.

Table C.10 illustrates the predicted enlistment rate of individuals at several points in the distribution of predicted scores. Again, there is a wide dispersion. Table C.11 presents the regression coefficients, their standard errors, the variable means, and their standard deviations for the logit analysis of low aptitude applicants not in high school detailed in Table C.9. Finally, Table C.12 shows the covariance matrix for this analysis.

Table C.1

SUPPLEMENTAL REGRESSION INFORMATION FOR HIGH APTITUDE HIGH SCHOOL SENIORS

Factor	Regression Coefficient	Coefficient Standard Error	Variable Mean	Standard Deviation
Demographic characteristics				
Race (vs. white, non-Hispanic)				
Black	.212	.279	.069	.253
Hispanic	.225	.299	.063	.242
AFQT percentile	.000	.006	69.888	12.467
Family income 1982 ($ thousand)[a]	−.018	.007	23.747	13.151
Number of siblings	−.023	.032	3.071	2.154
Economic opportunities				
Worked in past year	−.582	.261	.845	.362
Months since worked[b]	.077	.037	1.424	2.712
Job status in March 1983 (vs. out of labor force)				
Full-time job	−.475	.292	.087	.282
Part-time job	−.083	.214	.409	.492
Looking for work	−.510	.165	.283	.450
Education status/plans				
Wants to attend college	−.628	.169	.657	.475
Annual assistance needed[c] for college ($ thousand)	.151	.060	.904	1.324
Discussions about enlisting				
Discussed enlisting with parents	.236	.548	.983	.129
Discussed enlisting with siblings	.633	.266	.865	342
Discussed enlisting with teachers	.400	.224	.736	.441
Parents favorable toward enlisting[d]	−.322	.075	1.868	1.030
Siblings favorable toward enlisting[d]	−.275	.077	1.887	1.216
Teachers favorable toward enlisting[d]	−.162	.089	1.306	1.104
Military contacts and perceptions				
Service tested for (vs. Army)				
Marine Corps	.908	.223	.138	.346
Navy	−.112	.170	.257	.437
Air Force	.427	.191	.188	.391
Number of services contacted	.313	.084	1.682	.851
Perceived monthly enlisted pay after job training ($ hundred)[e]	.147	.057	5.006	1.796
Discussed post-service educational benefit program with recruiter	.309	.155	.718	.450

Table C.1—continued

Factor	Regression Coefficient	Coefficient Standard Error	Variable Mean	Standard Deviation
Control variables				
Family income unknown	−.480	.285	.114	.318
Uncertain of annual assistance needed to attend college[c]	.370	.474	.021	.142
Failed physical examination	−1.993	.420	.034	.181
Saw second recruiter because did not qualify for first choice service	−.978	.476	.021	.145
Uncertain of monthly enlisted pay	.470	.404	.068	.252

[a]Income set to $0 when unknown.
[b]Set to 0 if employed in March 1983 or did not work in past year.
[c]Set to 0 for those not wanting to attend college.
[d]On five-point favorability scale: 1 = very favorable to 5 = very unfavorable. Set to 0 if did not discuss enlisting with indicated person.
[e]Set to 0 for those unable to answer question.

Table C.2

COVARIANCE MATRIX OF PARAMETER ESTIMATES FOR HIGH APTITUDE HIGH SCHOOL SENIORS

	1	2	3	4	5	6
Demographic characteristics						
Race (vs. white, non-Hispanic)						
1. Black	—	.0086	.0003	.0002	−.0001	.0031
2. Hispanic		—	.0002	.0002	−.0006	.0005
3. AFQT percentile			—	−.0001	.0001	.0001
4. Family income 1982 ($ thousand)[a]				—	.0001	.0001
5. Number of siblings					—	.0005
Economic opportunities						
6. Worked in past year						
7. Months since worked[b]						
Job status in March 1983 (vs. out of labor force)						
8. Full-time job						
9. Part-time job						
10. Looking for work						
Education status/plans						
11. Wants to attend college						
12. Annual assistance needed for college ($ thousand)[c]						
Discussions about enlisting						
13. Discussed enlisting with parents						
14. Discussed enlisting with siblings						
15. Discussed enlisting with teachers						
16. Parents favorable toward enlisting[d]						
17. Siblings favorable toward enlisting[d]						
18. Teachers favorable toward enlisting[d]						
Military contacts and perceptions						
Service tested for (vs. Army)						
19. Marine Corps						
20. Navy						
21. Air Force						
22. Number of services contacted						
23. Perceived monthly enlisted pay after job training ($ hundred)[e]						
24. Discussed post-service educational benefit program with recruiter						
Control variables						
25. Family income unknown						
26. Uncertain of annual assistance needed to attend college[c]						
27. Failed physical examination						
28. Saw second recruiter because did not qualify for first choice service						
29. Uncertain of monthly enlisted pay						

Table C.2— continued

	7	8	9	10	11	12	13	14	15	16	17	18
1.	.0002	.0069	.0031	.0008	−.0038	.0002	−.0007	.0011	.0036	.0006	−.0007	−.0016
2.	.0002	.0027	.0014	.0028	−.0030	−.0001	.0221	−.0063	.0009	−.0004	.0016	−.0001
3.	−.0001	−.0001	.0001	−.0001	−.0001	.0001	.0001	.0001	.0001	−.0001	.0001	−.0001
4.	−.0001	−.0001	−.0001	.0001	−.0001	.0001	.0001	−.0001	.0001	.0001	−.0001	−.0001
5.	−.0001	−.0002	.0001	.0001	.0001	.0001	.0002	−.0012	.0001	−.0001	.0001	−.0001
6.	−.0055	−.0324	−.0324	.0082	−.0005	−.0001	−.0050	−.0020	−.0012	.0004	−.0001	.0001
7.	—	.0049	.0050	−.0012	−.0002	.0001	−.0006	−.0004	.0001	−.0001	−.0001	−.0001
8.		—	.0352	.0049	.0006	−.0008	.0007	−.0022	−.0012	−.0004	.0005	.0003
9.			—	.0038	−.0001	.0001	−.0001	−.0035	.0002	−.0008	.0002	−.0002
10.				—	.0010	−.0004	.0020	−.0017	−.0004	.0001	.0006	.0001
11.					—	−.0050	.0038	−.0001	−.0004	.0002	.0003	−.0002
12.						—	−.0010	−.0006	.0005	−.0002	−.0001	−.0002
13.							—	.0205	.0104	−.0114	.0039	.0023
14.								—	.0072	.0045	−.0135	.0019
15.									—	.0023	.0022	.0147
16.										—	−.0017	−.0010
17.											—	−.0010
18.												—
19.												
20.												
21.												
22.												
23.												
24.												
25.												
26.												
27.												
28.												
29.												

Table C.2—continued

	19	20	21	22	23	24	25	26	27	28	29
1.	−.0008	.0015	−.0052	.0001	.0003	.0001	.0039	−.0010	−.0001	−.0016	−.0002
2.	−.0006	.0001	−.0028	−.0003	.0007	.0010	.0051	−.0068	.0050	.0022	.0017
3.	.0001	−.0001	−.0001	−.0001	−.0001	−.0001	−.0001	.0001	−.0001	.0001	−.0001
4.	−.0001	.0001	−.0001	−.0001	.0001	−.0001	.0013	.0001	.0002	.0001	−.0001
5.	−.0001	.0001	.0001	.0001	.0001	−.0001	.0009	−.0001	.0001	−.0004	−.0001
6.	.0026	.0022	.0009	−.0008	.0004	.0009	−.0007	−.0032	.0047	.0018	.0018
7.	.0002	.0001	.0001	−.0001	.0001	.0002	.0001	.0003	−.0001	−.0005	.0003
8.	−.0006	−.0017	−.0028	.0003	−.0015	−.0003	.0026	−.0002	.0004	.0033	−.0047
9.	.0008	−.0001	−.0004	−.0001	−.0006	.0016	.0001	−.0019	.0003	.0029	−.0024
10.	−.0004	.0001	.0003	.0001	−.0003	.0005	.0030	−.0059	.0011	.0022	−.0005
11.	−.0007	.0007	−.0003	.0004	.0001	−.0022	.0001	−.0143	.0008	.0017	.0007
12.	−.0001	.0003	.0003	−.0002	−.0001	−.0003	−.0005	.0053	.0003	−.0018	−.0005
13.	.0012	−.0064	−.0029	.0005	−.0005	−.0016	.0012	−.0139	−.0068	.0084	−.0003
14.	.0015	−.0016	−.0036	−.0008	.0001	−.0009	.0011	−.0008	−.0008	.0061	.0031
15.	−.0007	−.0015	−.0029	−.0009	.0004	.0020	.0024	.0028	−.0037	−.0050	.0045
16.	−.0012	.0008	.0010	−.0002	.0004	−.0002	−.0002	.0025	.0016	.0013	.0017
17.	−.0002	−.0001	.0009	.0001	−.0001	−.0006	−.0001	.0001	.0013	−.0011	−.0006
18.	.0005	.0010	.0011	.0002	−.0003	−.0006	.0003	−.0016	.0016	.0022	−.0016
19.	—	.0109	.0105	−.0001	.0001	.0046	−.0034	−.0016	−.0026	.0047	.0009
20.		—	.0114	−.0007	−.0003	.0049	−.0012	−.0068	.0037	.0032	−.0011
21.			—	.0011	−.0002	.0029	−.0011	.0015	.0025	.0004	−.0044
22.				—	−.0001	−.0001	−.0007	.0011	−.0001	−.0067	.0003
23.					—	−.0001	.0005	−.0002	−.0003	.0008	.0174
24.						—	−.0007	−.0039	−.0012	.0012	.0029
25.							—	−.0099	.0047	.0010	−.0077
26.								—	.0044	−.0226	−.0155
27.									—	.0052	−.0015
28.										—	.0094
29.											—

[a]Income set to $0 when unknown.

[b]Set to 0 if employed in March 1983 or did not work in past year.

[c]Set to 0 for those not wanting to attend college.

[d]On five-point favorability scale: 1 = very favorable to 5 = very unfavorable. Set to 0 if did not discuss enlisting with indicated person.

[e]Set to 0 for those unable to answer question.

Table C.3

SUPPLEMENTAL REGRESSION INFORMATION FOR HIGH APTITUDE HIGH SCHOOL GRADUATES

Factor	Regression Coefficient	Coefficient Standard Error	Variable Mean	Variable Standard Deviation
Demographic characteristics				
Age (years)	−.078	.018	20.949	3.025
Race (vs. white, non-Hispanic)				
Black	.497	.170	.099	.298
Hispanic	−.055	.203	.058	.233
AFQT percentile	.003	.004	74.898	13.778
Number of siblings	−.015	.021	3.143	2.252
Economic opportunities				
Job status in March 1983 (vs. out of labor force)				
Full-time job	−.673	.135	.385	.487
Part-time job	−.462	.177	.200	.400
Looking for work	−.495	.137	.255	.436
Full-time job, applicant in college	.725	.249	.079	.271
Part-time job, applicant in college	.217	.266	.098	.297
Looking for work, applicant in college	.371	.268	.049	.217
Expected hourly wage, next civilian job ($)	−.070	.023	5.133	2.651
Satisfaction with current/last job[a]	.162	.052	1.993	.915
Education status/plans				
In college	−.891	.229	.305	.461
Wants to attend (continue) college/ vocational school	−.275	.134	.833	.373
Annual assistance needed for college/vocational school ($ thousand)[b]	.102	.033	1.346	1.489
Discussions about enlisting				
Discussed enlisting with siblings	.615	.171	.846	.361
Discussed enlisting with friends	.726	.213	.928	.258
Discussed enlisting with teachers	.373	.182	.388	.487
Siblings favorable toward enlisting[c]	−.162	.050	1.833	1.251
Friends favorable toward enlisting[c]	−.198	.042	2.345	1.320
Teachers favorable toward enlisting[c]	−.211	.078	0.751	1.127
Military contacts and perceptions				
Service tested for (vs. Army)				
Marine Corps	.226	.229	.092	.289
Navy	−.608	.141	.251	.434
Air Force	−.101	.141	.273	.446
Marine Corps, applicant in college	−.864	.354	.041	.198
Navy, applicant in college	.507	.259	.075	.264
Air Force, applicant in college	.065	.252	.082	.275
Number of services contacted	.153	.057	1.649	.855
Interested in military job security	.539	.126	.831	.375
Interested in military health/ family benefits	.291	.154	.895	.306

Table C.3—continued

Factor	Regression Coefficient	Coefficient Standard Error	Variable Mean	Variable Standard Deviation
Control variables				
Uncertain of next civilian wage	−.891	.236	.066	.249
Uncertain of annual assistance needed to attend school[b]	.565	.290	.030	.170
Failed physical examination	−2.418	.279	.054	.226
Saw second recruiter because did not qualify for first service	−.700	.208	.059	.236

[a]On four-point scale: 1 = like it very much to 4 = dislike it very much. Set to 0 for those who had never held a job.

[b]Set to 0 for those not wanting to attend school.

[c]On five-point favorability scale: 1 = very favorable to 5 = very unfavorable. Set to 0 if did not discuss enlisting with indicated person.

Table C.4

COVARIANCE MATRIX OF PARAMETER ESTIMATES FOR HIGH APTITUDE HIGH SCHOOL GRADUATES

	1	2	3	4	5	6	7	8	9
Demographic characteristics									
1. Age (years)	—	−.0004	−.0002	−.0001	−.0001	−.0001	.0002	−.0001	−.0001
Race (vs. white, non-Hispanic)									
2. Black		—	.0041	.0001	−.0003	.0012	−.0001	−.0005	.0007
3. Hispanic			—	.0001	−.0003	.0009	.0012	.0013	−.0003
4. AFQT percentile				—	−.0001	−.0001	−.0001	−.0001	.0001
5. Number of siblings					—	.0001	.0001	.0001	−.0001
Economic opportunities									
Job status in March 1983 (vs. out of labor force)						—	.0106	.0076	−.0180
6. Full-time job							—	.0065	−.0106
7. Part-time job								—	−.0078
8. Looking for work									—
9. Full-time job, applicant in college									
10. Part-time job, applicant in college									
11. Looking for work, applicant in college									
12. Expected hourly wage, next civilian job ($)									
13. Satisfaction with current/last job[a]									
Education status/plans									
14. In college									
15. Wants to attend (continue) college/ vocational school									
16. Annual assistance needed for college/ vocational school ($ thousand)[b]									

Table C.4—continued

	1	2	3	4	5	6	7	8	9
Discussions about enlisting									
17. Discussed enlisting with siblings									
18. Discussed enlisting with friends									
19. Discussed enlisting with teachers									
20. Siblings favorable toward enlisting[c]									
21. Friends favorable toward enlisting[c]									
22. Teachers favorable toward enlisting[c]									
Military contacts and perceptions									
Service tested for (vs. Army)									
23. Marine Corps									
24. Navy									
25. Air Force									
26. Marine Corps, applicant in college									
27. Navy, applicant in college									
28. Air Force, applicant in college									
29. Number of services contacted									
30. Interested in military job security									
31. Interested in military health/family benefits									
Control variables									
32. Uncertain of next civilian wage									
33. Uncertain of annual assistance needed to attend school[b]									
34. Failed physical examination									
35. Saw second recruiter because did not qualify for first service									

Table C.4—continued

	10	11	12	13	14	15	16	17	18	19	20	21	22
1.	−.0001	.0001	−.0001	−.0001	.0002	−.0001	−.0001	−.0001	.0001	.0002	.0001	.0001	−.0001
2.	.0014	−.0023	−.0001	−.0001	−.0010	−.0014	−.0003	.0004	.0014	.0002	.0001	−.0001	−.0006
3.	−.0019	−.0027	.0002	.0001	.0001	−.0005	−.0005	.0004	−.0003	−.0014	.0002	−.0001	.0001
4.	.0001	.0001	−.0001	−.0001	−.0001	−.0001	.0001	.0001	−.0001	.0001	−.0001	−.0001	−.0001
5.	.0001	.0001	.0001	−.0001	.0003	−.0001	−.0001	−.0005	−.0001	−.0001	−.0001	.0001	.0001
6.	−.0105	−.0077	−.0002	.0001	.0120	.0003	−.0002	−.0008	−.0001	−.0001	−.0001	.0001	.0001
7.	−.0310	−.0064	−.0008	.0001	.0118	.0001	.0001	−.0003	−.0001	−.0004	−.0002	.0002	−.0001
8.	−.0068	−.0185	.0003	.0007	.0103	.0001	−.0002	−.0006	−.0002	−.0007	.0001	−.0001	.0004
9.	.0287	.0163	−.0001	−.0003	−.0306	−.0001	.0004	.0003	.0005	.0005	.0002	−.0001	−.0005
10.	—	.0170	.0001	−.0009	−.0306	.0002	−.0001	.0001	−.0003	.0002	.0001	−.0003	.0001
11.		—	−.0001	−.0006	−.0247	.0003	.0001	−.0005	.0003	.0004	.0001	−.0002	.0002
12.			—	.0001	.0002	−.0002	.0001	.0002	.0001	−.0001	−.0001	−.0001	.0001
13.				—	.0008	−.0002	−.0001	.0002	.0004	.0003	−.0001	−.0001	−.0001
14.					—	−.0021	−.0003	.0004	−.0018	−.0005	−.0002	.0003	−.0006
15.						—	−.0012	−.0010	−.0008	−.0015	.0001	−.0001	.0002
16.							—	.0001	.0001	.0002	−.0001	.0001	−.0001
17.								—	.0062	.0030	−.0053	.0008	.0011
18.									—	.0047	.0011	−.0045	.0010
19.										—	.0009	.0010	−.0118
20.											—	−.0004	−.0004
21.												—	−.0005
22.													—
23.													
24.													
25.													
26.													
27.													
28.													
29.													
30.													
31.													
32.													
33.													
34.													
35.													

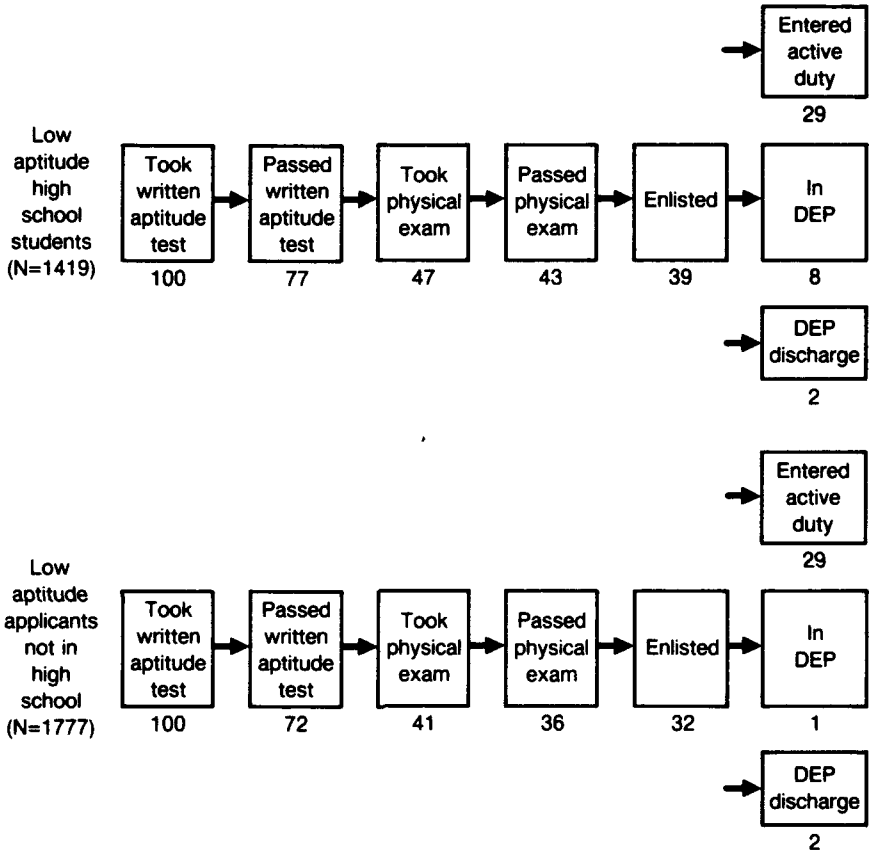
Table C.4—continued

	23	24	25	26	27	28	29	30	31	32	33	34	35
1.	.0002	−.0001	.0003	.0001	.0001	−.0001	.0001	−.0001	−.0002	−.0010	−.0002	.0002	−.0004
2.	−.0014	.0006	−.0013	−.0022	−.0011	.0004	.0002	.0007	−.0001	−.0017	.0003	−.0018	−.0005
3.	−.0021	.0002	−.0012	.0016	.0001	−.0001	.0003	.0004	.0003	.0015	.0003	−.0004	−.0007
4.	−.0001	−.0001	−.0001	−.0001	.0001	.0001	−.0001	.0001	.0001	−.0001	−.0001	.0001	.0001
5.	.0001	.0001	.0001	−.0002	−.0001	−.0002	.0001	.0001	−.0001	.0001	−.0001	.0001	−.0002
6.	−.0001	.0006	−.0007	−.0001	−.0007	.0004	.0002	.0003	−.0001	−.0018	−.0005	.0026	−.0001
7.	.0003	.0006	.0001	.0001	−.0005	.0001	−.0001	−.0004	.0010	−.0011	.0003	.0027	−.0001
8.	.0012	.0001	.0005	−.0013	−.0001	−.0004	.0001	−.0014	.0001	.0022	−.0007	.0015	.0005
9.	−.0001	−.0006	.0005	.0013	−.0001	−.0023	−.0001	.0007	−.0009	.0001	.0015	−.0011	.0002
10.	−.0002	−.0004	.0002	−.0010	−.0005	−.0005	.0002	.0012	−.0013	−.0001	−.0004	−.0004	.0004
11.	.0011	−.0001	−.0004	.0013	−.0007	.0007	.0003	−.0001	.0010	−.0023	.0015	−.0005	−.0028
12.	−.0001	.0001	.0001	−.0001	−.0001	.0001	−.0001	.0001	−.0002	.0031	.0003	.0001	.0001
13.	.0002	−.0003	−.0001	−.0004	.0004	−.0002	.0001	−.0003	.0001	.0009	.0001	−.0003	−.0001
14.	.0088	.0081	.0082	−.0279	−.0273	−.0275	−.0005	−.0003	.0005	.0017	−.0003	.0015	.0016
15.	−.0002	.0005	−.0009	.0006	−.0002	.0002	−.0003	.0001	−.0009	.0001	−.0011	.0019	.0015
16.	.0001	−.0001	.0001	.0005	.0005	.0002	.0001	.0001	.0001	.0001	.0015	−.0003	−.0001
17.	−.0002	−.0006	−.0004	−.0008	.0005	−.0005	.0001	−.0009	−.0018	.0010	.0001	−.0006	.0005
18.	−.0001	−.0004	.0001	.0016	.0019	.0016	.0001	−.0008	−.0004	.0008	.0020	−.0017	.0004
19.	−.0004	−.0002	−.0011	−.0019	−.0019	.0002	−.0007	.0009	−.0004	−.0002	−.0001	−.0018	−.0011
20.	−.0003	.0003	.0003	.0005	−.0002	−.0001	−.0001	.0002	.0001	−.0001	.0004	.0003	.0001
21.	.0001	.0001	.0001	−.0001	.0001	−.0001	−.0001	.0001	.0001	−.0004	−.0001	.0006	−.0001
22.	.0001	.0001	.0001	.0001	.0006	.0002	.0001	−.0006	.0003	.0004	.0004	.0004	.0005
23.	—	.0077	.0081	−.0522	−.0076	−.0081	−.0004	−.0003	−.0003	−.0003	.0014	−.0008	.0006
24.		—	.0079	−.0077	−.0200	−.0078	.0002	−.0006	.0003	.0011	−.0004	.0023	.0007
25.			—	−.0075	−.0075	−.0192	.0007	−.0003	−.0014	.0009	.0006	.0010	.0013
26.				—	.0279	.0275	.0007	.0004	−.0003	.0003	.0004	.0033	−.0029
27.					—	.0275	.0004	.0006	−.0016	−.0004	.0004	−.0015	−.0024
28.						—	.0004	−.0006	.0001	.0007	.0004	.0001	−.0011
29.							—	.0002	.0002	−.0002	.0009	−.0001	−.0028
30.								—	−.0015	.0008	.0006	−.0011	−.0017
31.									—	−.0017	.0006	−.0011	−.0008
32.										—	−.0024	.0017	.0026
33.											—	−.0030	.0001
34.												—	.0008
35.													—

[a]On four-point scale: 1 = like it very much to 4 = dislike it very much. Set to 0 for those who had never held a job.

[b]Set to 0 among those not wanting to attend school.

[c]On five-point favorability scale: 1 = very favorable to 5 = very unfavorable. Set to 0 if did not discuss enlisting with indicated person.



NOTE: The figure reflects the furthest stage in the active duty enlistment process reached by the applicants as of 30 April 1984, one year after taking the written test. Results are shown separately for high aptitude seniors (AFQT score at the 50th percentile or above, high school seniors in April 1983) and high aptitude high school graduates. The "Passed physical exam" group excludes applicants whose exams resulted in permanent or remedial failures; those taking physicals are persons processed for active duty services.

Fig. C.1—Enlistment status of the low aptitude applicant sample

Table C.5

REGRESSION ANALYSIS OF ENLISTMENT DECISION FOR LOW APTITUDE HIGH SCHOOL STUDENTS[a]

Factor[b]	$\beta P(1-P)$[c]	P-Level[d]
Demographic characteristics		
Race (vs. white, non-Hispanic)		
Black	.124	.002
Hispanic	.004	ns
AFQT category (vs. IIIB)		
I-IIIA	.016	ns
IV	−.558	.001
Number of siblings	.003	ns
Economic opportunities		
Worked in past year	.070	ns
Months since worked[e]	−.013	ns
Job status in March 1983 (vs. out of labor force)		
Full-time job	−.101	ns
Part-time job	−.116	.025
Looking for work	−.002	ns
Discussions about enlisting		
Discussed enlisting with parents	.121	ns
Discussed enlisting with siblings	.186	.002
Discussed enlisting with teachers	.172	.001
Parents favorable toward enlisting[f]	.032	.057
Siblings favorable toward enlisting[f]	.036	.039
Teachers favorable toward enlisting[f]	.038	.067
Military contacts and interests[g]		
Service tested for (vs. Army)		
Marine Corps	.106	.030
Navy	−.107	.010
Air Force	.047	ns
Number of services contacted	.043	.028
Perceived monthly enlisted pay after job training ($ hundred)	.029	.027

[a]Logit model predicting a binary dependent variable (enlisted as of 30 April 1984 vs. did not enlist). Independent variables are binary variables except as noted. Base N = 1419; R^2 = .176 (linear); intercept = .6707, ns.

[b]Model includes following additional control variables ($\beta P(1-P)$, P-level): uncertain of monthly enlisted pay (.008, ns); failed physical examination (−.615, .001); failed written examination (−.272, .001); saw second recruiter because did not qualify for first choice service (.091, ns).

[c]The change in enlistment rate associated with a change of one unit in the indicated factor, approximated by multiplying the coefficient for the factor by P(1 − P), where P is the mean enlistment rate for the regression sample (.392).

[d]From chi-square test; ns means not significant, i.e., $p > .10$.

[e]Set to 0 if employed in March 1983 or did not work in past year.

[f]Uses five-point favorability scale: very unfavorable to very favorable. Teachers include counselors and coaches.

[g]Variables representing Enlistment Bonus Test cell in earlier models were dropped due to insignificance.

Table C.6

VARIATION IN ACTUAL ENLISTMENT RATE BY PREDICTED ENLISTMENT PROBABILITY FOR LOW APTITUDE HIGH SCHOOL STUDENTS[a]

Position in Distribution of Predicted Enlistment Probabilities	Mean Predicted Enlistment Probability	Actual Enlistment Rate
Percentiles 1 - 20	.12	.15
Percentiles 21 - 40	.34	.32
Percentiles 41 - 60	.52	.52
Percentiles 61 - 80	.64	.57
Percentiles 81 - 100	.76	.81

[a]Results are for applicants who qualified to enlist (i.e., did not fail physical or written examination for the service tested for).

Table C.7

SUPPLEMENTAL REGRESSION INFORMATION FOR LOW APTITUDE HIGH SCHOOL STUDENTS

Factor	Regression Coefficient	Coefficient Standard Error	Variable Mean	Variable Standard Deviation
Demographic characteristics				
Race (vs. white, non-Hispanic)				
Black	.520	.166	.291	.454
Hispanic	.018	.249	.082	.275
AFQT category (vs. IIIB)				
I-IIIA	.067	.176	.147	.354
IV	−2.346	.186	.377	.485
Number of siblings	.013	.026	3.784	2.665
Economic Opportunities				
Worked in past year	.296	.235	.799	.401
Months since worked[a]	−.054	.034	1.646	2.876
Job status in March 1983 (vs. out of labor force)				
Full-time job	−.426	.271	.103	.304
Part-time job	−.486	.217	.309	.462
Looking for work	−.007	.154	.364	.481
Discussions about enlisting				
Discussed enlisting with parents	.510	.692	.988	.109
Discussed enlisting with siblings	.782	.255	.860	.347
Discussed enlisting with teachers	.724	.215	.745	.436
Parents favorable toward enlisting[b]	−.133	.070	1.767	1.045
Siblings favorable toward enlisting[b]	−.151	.073	1.702	1.194
Teachers favorable toward enlisting[b]	−.159	.087	1.235	1.066
Military contacts and perceptions				
Service tested for (vs. Army)				
Marine Corps	.447	.205	.130	.336
Navy	−.449	.174	.181	.385
Air Force	.198	.199	.141	.348
Number of services contacted	.182	.083	1.636	.819
Perceived monthly enlisted pay after job training ($ hundred)[c]	.122	.055	4.719	1.911
Control variables				
Failed physical examination	−2.585	.533	.027	.164
Failed written examination	−1.144	.238	.203	.402
Saw second recruiter because did not qualify for first choice service	.382	.255	.078	.268
Uncertain of monthly enlisted pay	.033	.385	.089	.286

[a]Set to 0 if employed in March 1983 or did not work in past year.

[b]On five-point favorability scale: 1 = very favorable to 5 = very unfavorable. Set to 0 if did not discuss enlisting with indicated person.

[c]Set to $0 for those unable to answer question.

Table C.8

COVARIANCE MATRIX OF PARAMETER ESTIMATES FOR LOW APTITUDE HIGH SCHOOL STUDENTS

	1	2	3	4	5	6	7
Demographic characteristics							
Race (vs. white, non-Hispanic)							
1. Black	→	.0088	.0042	−.0068	−.0006	−.0026	−.0002
2. Hispanic		—	.0040	−.0022	−.0007	.0027	.0002
AFQT category (vs. IIIB)							
3. I-IIIA			—	.0058	.0002	.0016	.0005
4. IV				—	−.0001	.0023	.0003
5. Number of siblings					—	−.0001	−.0001
Economic opportunities							
6. Worked in past year						—	−.0051
7. Months since worked[a]							—
Job status in March 1983 (vs. out of labor force)							
8. Full-time job							
9. Part-time job							
10. Looking for work							

Table C.8—continued

	1	2	3	4	5	6	7
Discussions about enlisting							
11. Discussed enlisting with parents							
12. Discussed enlisting with siblings							
13. Discussed enlisting with teachers							
14. Parents favorable toward enlisting[b]							
15. Siblings favorable toward enlisting[b]							
16. Teachers favorable toward enlisting[b]							
Military contacts and perceptions							
Service tested for (vs. Army)							
17. Marine Corps							
18. Navy							
19. Air Force							
20. Number of services contacted							
21. Perceived monthly enlisted pay after job training ($ hundred)[c]							
Control variables							
22. Failed physical examination							
23. Failed written examination							
24. Saw second recruiter because did not qualify for first choice service							
25. Uncertain of monthly enlisted pay							

Table C.8—continued

	8	9	10	11	12	13	14	15	16
1.	.0028	−.0010	−.0016	.0001	.0007	−.0002	−.0001	.0005	−.0004
2.	.0033	.0020	−.0011	−.0021	−.0016	−.0008	.0001	.0006	−.0001
3.	.0032	.0032	.0004	−.0028	−.0020	.0015	.0002	.0006	−.0008
4.	.0024	.0042	.0002	−.0032	−.0044	−.0039	.0005	.0010	.0013
5.	−.0004	−.0001	.0001	.0010	−.0008	.0001	.0001	.0001	.0001
6.	−.0311	−.0310	.0060	.0009	−.0058	−.0008	.0006	−.0012	.0001
7.	.0047	.0047	−.0008	.0002	−.0006	−.0001	−.0001	.0001	−.0001
8.	—	.0333	.0029	.0103	−.0038	−.0007	−.0013	.0011	−.0001
9.		—	.0054	−.0004	−.0029	−.0017	−.0005	.0006	.0001
10.			—	.0032	−.0002	−.0006	.0003	.0002	−.0001
11.				—	.0379	.0154	−.0104	.0031	.0023
12.					—	.0046	.0046	−.0115	.0016
13.						—	.0017	.0021	−.0131
14.							—	−.0017	−.0005
15.								—	−.0010
16.									—
17.									
18.									
19.									
20.									
21.									
22.									
23.									
24.									
25.									

Table C.8—continued

	17	18	19	20	21	22	23	24	25
1.	−.0002	.0010	−.0010	.0002	.0001	−.0042	−.0032	−.0017	.0030
2.	−.0021	−.0007	−.0011	.0005	−.0001	−.0030	.0008	−.0016	−.0017
3.	.0033	.0020	.0009	.0005	−.0003	−.0024	.0006	−.0004	−.0001
4.	.0006	.0044	.0052	−.0010	.0002	.0075	−.0119	−.0009	.0007
5.	−.0001	−.0001	.0001	.0001	−.0001	.0004	−.0002	−.0001	−.0005
6.	.0007	−.0013	.0004	−.0005	.0007	.0049	−.0006	−.0003	.0042
7.	−.0001	.0003	−.0001	−.0001	−.0001	−.0008	.0002	−.0002	−.0004
8.	.0014	−.0004	−.0029	.0001	−.0007	−.0015	−.0002	−.0002	−.0019
9.	.0001	.0001	−.0010	−.0004	−.0009	.0001	.0003	.0007	−.0040
10.	.0019	.0006	.0020	.0002	.0002	−.0004	−.0010	−.0010	.0001
11.	.0057	−.0008	−.0054	−.0001	.0013	−.0057	−.0003	.0068	.0218
12.	−.0026	−.0023	−.0007	.0006	.0005	−.0019	−.0014	−.0018	.0025
13.	.0009	−.0018	−.0017	−.0007	−.0001	−.0045	−.0001	.0013	.0019
14.	−.0004	.0005	.0005	−.0002	−.0001	.0010	.0008	−.0007	−.0008
15.	.0012	.0004	.0003	−.0001	−.0001	.0005	.0007	−.0001	−.0009
16.	.0001	.0013	.0008	−.0001	.0001	.0013	.0001	−.0006	.0005
17.	—	.0082	.0085	−.0006	−.0001	−.0014	−.0020	−.0021	−.0010
18.		—	.0086	−.0011	.0007	.0042	.0008	−.0006	.0047
19.			—	−.0003	−.0001	.0021	−.0088	−.0028	−.0008
20.				—	−.0002	−.0007	.0007	−.0047	−.0002
21.					—	−.0015	−.0003	−.0001	.0161
22.						—	.0005	−.0021	−.0074
23.							—	−.0052	−.0013
24.								—	−.0014
25.									—

[a]Set to 0 if employed in March 1983 or did not work in past year.

[b]On five-point favorability scale: 1 = very favorable to 5 = very unfavorable. Set to 0 if did not discuss enlisting with indicated person.

[c]Set to $0 for those unable to answer question.

Table C.9

REGRESSION ANALYSIS OF ENLISTMENT DECISION FOR LOW APTITUDE APPLICANTS NOT IN HIGH SCHOOL[a]

Factor[b]	$\beta P(1-P)$[c]	P-Level[d]
Demographic characteristics		
Age (years)	−.012	.015
Race (vs. white, non-Hispanic)		
Black	−.002	ns
Hispanic	−.040	ns
AFQT category (vs. IIIB)		
I-IIIA	.255	.001
IV	−.267	.001
Number of siblings	−.004	ns
Economic opportunities		
Worked in past year	−.034	ns
Months employed current job[e]	−.026	.019
Job status in March 1983 (vs. out of labor force)		
Full-time job	−.065	.046
Part-time job	−.087	.031
Looking for work	−.020	ns
Education status/plans		
High school diploma graduate	.322	.001
In college	−.064	ns
Plan vocational training	−.049	.077
Plan vocational training, applicant in college	.215	.004
Discussions about enlisting		
Discussed enlisting with siblings	.093	.047
Discussed enlisting with teachers	.107	.018
Siblings favorable toward enlisting[f]	.045	.001
Teachers favorable toward enlisting[f]	.042	.060
Military contacts and interests[g]		
Service tested for (vs. Army)		
Marine Corps	−.035	ns
Navy	−.174	.001
Air Force	−.043	ns
Number of services contacted	.055	.001
Interested in military job security	−.092	.024
Discussed in-service training opportunities with recruiter	.070	.008

[a]Logit model predicting a binary dependent variable (enlisted as of 30 April 1984 vs. did not enlist). Independent variables are binary variables except as noted. Base N = 1777; R^2 = .222 (linear); intercept = .8673, ns.

[b]Model includes additional control variables ($\beta P(1-P)$, P-level): failed physical examination (−.400, .001); failed written examination (−.296, .001); and saw second recruiter because did not qualify for first choice service (−.008, ns).

[c]The change in enlistment rate associated with a change of one unit in the indicated factor, approximated by multiplying the coefficient for the factor by $P(1-P)$, where P is the mean enlistment rate for the regression sample (.319).

[d]From chi-square test; ns = not significant, i.e., $p > .10$.

[e]Set to 0 for these not working. Measure is the log of month employed plus one.

[f]Uses five-point favorability scale: very unfavorable to very favorable. Teachers include counselors and coaches.

[g]Variables representing Enlistment Bonus Test cell in earlier models were dropped due to insignificance.

Table C.10

VARIATION IN ACTUAL ENLISTMENT RATE BY PREDICTED ENLISTMENT PROBABILITY FOR LOW APTITUDE APPLICANTS NOT IN HIGH SCHOOL[a]

Position in Distribution of Predicted Enlistment Probabilities	Mean Predicted Enlistment Probability	Actual Enlistment Rate
Percentiles 1 – 20	.14	.15
Percentiles 21 – 40	.27	.26
Percentiles 41 – 60	.41	.40
Percentiles 61 – 80	.54	.56
Percentiles 81 –100	.70	.69

[a]Results are for applicants who qualified to enlist (i.e., did not fail physical or written examination for the service tested for).

Table C.11

SUPPLEMENTAL REGRESSION INFORMATION FOR LOW APTITUDE APPLICANTS NOT IN HIGH SCHOOL

Factor	Regression Coefficient	Coefficient Standard Error	Variable Mean	Variable Standard Deviation
Demographic characteristics				
Age (years)	−.053	.022	20.044	2.896
Race (vs. white, non-Hispanic)				
Black	−.007	.153	.270	.444
Hispanic	−.186	.212	.098	.298
AFQT category (vs. IIIB)				
I-IIIA	1.174	.181	.172	.377
IV	−1.231	.156	.414	.493
Number of siblings	−.017	.022	4.038	2.891
Economic opportunities				
Worked in past year	−.158	.210	.898	.303
Months on current job[a]	.119	.051	1.010	1.372
Job status in March 1983 (vs. out of labor force)				
Full-time job	−.299	.149	.333	.471
Part-time job	−.402	.187	.155	.362
Looking for work	−.090	.150	.376	.484
Education status/plans				
High school diploma graduate	1.485	.170	.591	.492
In college	−.293	.253	.125	.331
Plans vocational training	−.226	.128	.515	.500
Plan vocational training, applicant in college[b]	.990	.342	.063	.243

Table C.11—continued

Factor	Regression Coefficient	Coefficient Standard Error	Variable Mean	Variable Standard Deviation
Discussions about enlisting				
Discussed enlisting with siblings	.428	.215	.867	.339
Discussed enlisting with teachers	.494	.208	.423	.494
Siblings favorable toward enlisting[c]	−.208	.062	1.698	1.210
Teachers favorable toward enlisting[c]	−.192	.102	.706	1.033
Military contacts and perceptions				
Service tested for (vs. Army)				
Marine Corps	−.162	.227	.074	.261
Navy	−.802	.155	.222	.416
Air Force	−.197	.180	.168	.374
Number of services contacted	.256	.078	1.575	.806
Interested in military job security	−.423	.188	.897	.304
Discussed in service training program with recruiter	.322	.122	.565	.496
Control variables				
Failed physical examination	−1.841	.370	.039	.193
Failed written examination	−1.362	.227	.248	.432
Saw second recruiter because did not qualify for first choice service	−.039	.191	.137	.344

[a]Set to 0 for those not working. Measure is the log of months employed plus one.
[b]Set to 0 for those not in college.
[c]On five-point favorability scale: 1 = very favorable to 5 = very unfavorable. Set to 0 if did not discuss enlisting with indicated person.

Table C.12

COVARIANCE MATRIX OF PARAMETER ESTIMATES FOR LOW APTITUDE APPLICANTS NOT IN HIGH SCHOOL

	1	2	3	4	5	6	7
Demographic characteristics							
1. Age (years)	—	−.0001	−.0002	−.0003	.0002	−.0001	−.0002
Race (vs. white, non-Hispanic)							
2. Black		—	.0068	.0012	−.0027	−.0005	.0020
3. Hispanic			—	−.0001	−.0011	−.0005	−.0006
AFQT Category (vs. IIIB)							
4. I-IIIA				—	.0037	.0001	−.0007
5. IV					—	−.0001	.0007
6. Number of siblings						—	−.0001
Economic opportunities							
7. Worked in past year[a]							—
8. Months on current job							
Job status in March 1983 (vs. out of labor force)							
9. Full-time job							
10. Part-time job							
11. Looking for work							
Education status/plans							
12. High school diploma graduate							
13. In college							
14. Plans vocational training							
15. Plans vocational training, applicant in college[b]							

Table C.12—continued

	1	2	3	4	5	6	7
Discussions about enlisting							
16. Discussed enlisting with siblings							
17. Discussed enlisting with teachers							
18. Siblings favorable toward enlisting[c]							
19. Teachers favorable toward enlisting[c]							
Military contacts and perceptions							
Service tested for (vs. Army)							
20. Marine Corps							
21. Navy							
22. Air Force							
23. Number of services contacted							
24. Interested in military job security							
25. Discussed in service training program with recruiter							
Control variables							
26. Failed physical examination							
27. Failed written examination							
28. Saw second recruiter because did not qualify for first choice service							

Table C.12—continued

	8	9	10	11	12	13	14	15	16	17	18
1.	−.0001	−.0001	.0001	−.0003	−.0007	.0001	−.0001	.0001	.0001	.0003	.0001
2.	.0001	.0011	.0005	−.0019	−.0027	−.0058	−.0009	.0021	−.0001	.0003	−.0001
3.	.0008	−.0004	−.0003	.0012	−.0006	−.0029	−.0007	.0032	−.0007	−.0001	.0002
4.	−.0001	−.0002	.0001	.0001	.0159	−.0015	−.0001	.0029	−.0006	.0029	−.0005
5.	−.0003	−.0002	−.0001	.0006	−.0052	.0005	−.0001	−.0004	−.0019	−.0009	.0007
6.	−.0001	.0001	.0001	.0001	.0002	.0003	−.0001	.0001	−.0005	.0001	−.0001
7.	−.0011	−.0060	−.0067	.0029	.0001	.0033	−.0004	−.0041	−.0011	−.0010	−.0005
8.	—	−.0013	−.0012	.0031	−.0003	.0002	.0001	.0004	.0002	.0001	−.0001
9.		—	.0110	.0044	−.0004	.0021	.0006	−.0021	−.0001	.0014	−.0005
10.			—	.0041	−.0006	−.0035	.0008	.0004	−.0017	−.0006	−.0001
11.				—	.0006	.0018	.0008	−.0008	−.0001	−.0001	.0001
12.					—	−.0033	−.0007	.0011	.0009	.0013	−.0008
13.						—	.0084	−.0598	.0033	.0007	−.0014
14.							—	−.0163	−.0008	−.0013	−.0001
15.								—	.0001	.0018	.0002
16.									—	.0063	−.0075
17.										—	.0020
18.											—
19.											
20.											
21.											
22.											
23.											
24.											
25.											
26.											
27.											
28.											

Table C.12—continued

	19	20	21	22	23	24	25	26	27	28
1.	−.0001	.0003	.0001	.0001	−.0002	.0001	.0001	.0001	.0001	−.0002
2.	−.0010	.0001	.0020	.0022	.0001	.0004	.0002	−.0012	−.0036	−.0012
3.	−.0006	−.0029	−.0005	−.0015	.0002	.0009	.0001	−.0002	−.0014	−.0013
4.	−.0012	−.0003	−.0015	−.0002	−.0001	−.0012	.0002	−.0045	.0023	−.0003
5.	.0003	.0044	.0028	.0044	−.0005	−.0002	.0003	.0039	−.0115	−.0002
6.	.0001	−.0001	.0001	.0001	.0001	.0001	−.0001	.0005	−.0001	−.0001
7.	.0007	−.0002	.0006	−.0006	−.0002	−.0001	−.0017	−.0019	.0017	−.0011
8.	−.0001	.0001	−.0001	−.0004	−.0002	.0001	−.0002	−.0001	−.0001	.0005
9.	−.0006	−.0012	−.0011	−.0020	.0002	.0026	−.0002	.0012	−.0006	−.0001
10.	−.0002	−.0007	−.0020	−.0011	.0006	.0007	−.0004	−.0005	−.0005	.0001
11.	.0002	.0001	.0001	.0001	−.0003	−.0015	−.0006	.0019	−.0003	.0002
12.	−.0006	−.0062	.0031	−.0074	.0004	−.0007	−.0001	−.0063	.0049	.0029
13.	−.0017	.0028	.0012	−.0030	−.0006	.0022	−.0007	.0012	.0017	.0018
14.	.0002	.0007	−.0002	.0002	−.0001	.0002	−.0006	−.0015	.0006	−.0004
15.	−.0006	.0027	.0016	.0012	.0005	−.0006	−.0004	.0008	−.0023	−.0015
16.	.0024	−.0003	.0002	−.0026	.0001	−.0024	−.0008	−.0018	−.0007	.0009
17.	−.0172	−.0017	−.0010	.0010	−.0002	−.0014	−.0012	.0008	−.0024	−.0008
18.	−.0009	−.0003	.0005	.0005	−.0003	.0006	.0001	.0007	.0006	.0001
19.	—	−.0001	.0001	−.0009	−.0001	.0005	.0004	−.0003	.0007	.0004
20.		—	.0080	.0094	−.0015	.0014	.0012	.0017	−.0016	.0016
21.			—	.0080	−.0011	.0014	.0011	.0037	.0004	−.0014
22.				—	−.0002	−.0021	.0017	.0052	−.0083	−.0022
23.					—	.0004	−.0005	−.0004	.0001	−.0056
24.						—	−.0008	.0009	.0007	−.0007
25.							—	−.0004	−.0001	.0003
26.								—	.0001	.0011
27.									—	−.0022
28.										

[a]Set to 0 for those not working. Measure is the log of months employed plus one.

[b]Set to 0 for those not in college.

[c]On five-point favorability scale: 1 = very favorable to 5 = very unfavorable. Set 0 if did not discuss enlisting with indicated person.

Appendix D

PREDICTING ENLISTMENTS FROM INTENTION RESPONSES TO HYPOTHETICAL OPTIONS

SIMPLE METHOD

Predicting changes in the enlistment rate under various educational benefit or cash enlistment bonus options with the "simple" method required several steps. (1) We initially determined the actual enlistment rates for each enlistment intention category. For applicants, enlistment rates were calculated for five groups: those who stated in the interview that they definitely would enlist, probably would enlist, were uncertain if they would enlist, probably would not enlist, or definitely would not enlist, given existing options. In the national survey, two groups were distinguished: those stating positive or negative intentions (see Orvis and Gahart, 1985). (2) To assess the effect of a particular hypothetical option, we determined the distribution of enlistment intentions (definitely, probably, etc.) given in response to the new option. (3) The enlistment rate established for each intention category in step 1 was then multiplied by the proportion of respondents choosing that intention category under the new option (from step 2). The sum of these products represents the projected enlistment rate under the new option.[1] (4) Finally, the enlistment rate under the baseline program was subtracted from the predicted enlistment rate under the new option to estimate the increase in enlistments attributable to the new option. The method is illustrated in Table D.1.

For the applicant surveys, the enlistment probabilities corresponding to the interviewees' enlistment intentions were determined by following up the respondents one year after they took the ASVAB and observing their actual behavior. For the national sample, enlistment rates for the positive and negative intention groups were determined from a composite database, combining results from the Youth Attitude Tracking

[1]In the applicant surveys, we also had to estimate the response to the new option among interviewees who had enlisted before being interviewed and, thus, who were not asked about their intentions. Since all of the new options were more generous than the baseline program, this was straightforward; it was assumed that applicants who had enlisted before the interview would also have enlisted under the more generous option packages. The results for applicants who had enlisted and who had not enlisted before being interviewed were combined to estimate the overall enlistment rate for the new option.

Table D.1

EXAMPLE OF SIMPLE METHOD FOR PREDICTING ENLISTMENT RATES
(Predicted enlistments among high school respondents in national survey)

Step 1: Determine actual enlistment rates for enlistment intention categories on baseline propensity measure.

	Positive Intention	Negative Intention	Total
Enlistment rate:	.2140	.0701	.1246
	(E_1)	(E_2)	

Step 2: Determine enlistment intention responses to hypothetical options (e.g., $23,000 educational benefit).

	Positive Intention	Negative Intention
Proportion of sample	.6831	.3169
	(D_1)	(N_2)

Step 3: Combine results from steps 1–2.

Predict enlistment rate for $23,000 educational benefit:

$R_n = E_1N_1 + E_2N_2 = (.2140)(.6831) + (.0701)(.3169) = .1684$

Step 4: Predict enlistment rate increase for $23,000 educational benefit:

$I = R_n - .1246 = .1684 - .1246 = .0438$

Study (YATS)[2] and the MEPS Reporting System (MRS). This work is described in detail in Orvis and Gahart, 1985.

The data provide three types of information: (1) whether the individual had enlisted by the end of a prescribed period (MRS); (2) demographic variables (YATS); and (3) enlistment intention (positive or negative) under baseline conditions (YATS).

MULTIVARIATE METHOD

Under the "multivariate" method, the process of predicting enlistment rates under hypothetical options consists of three phases. The

[2]The YATS is a national survey, administered to youths 16–21 years of age. The composite database matched results from survey waves covering 1976–1980 with enlistment records through April 1984. The background and intention questions used from the YATS were the same as those used in the Grey Survey.

first estimates the relationships between individual enlistment decisions, demographics, and enlistment intention measures under existing incentives.[3] The second and third phases use the estimated relationships to predict enlistment rates as enlistment intentions change in response to changes in the enlistment incentives offered. The procedure takes into consideration the inherent subjectivity of stated enlistment intentions. Research has shown that two people reporting similar enlistment intentions are not necessarily equally likely to enlist (see Orvis and Gahart, 1985). To account for this phenomenon, demographic variables are used to adjust intention responses and the influence of intentions on enlistment is given a random component. The method merges ordered polytomous multivariate probit models, maximum likelihood estimation (MLE), and simulation.

Applicant Enlistment Decision/Intention Model

The data available to estimate the relationship between enlistment and intention for applicants contain three types of information: (1) whether an applicant enlisted prior to the survey; (2) demographic variables; and, if the applicant had not enlisted before the survey date, (3) enlistment intentions (measured on a five-point ordered scale) under existing enlistment options and for a number of hypothetical incentive packages. Presented with such data, an ordered polytomous multivariate probit model (Amemiya, 1981) will estimate the relationship between enlistment and enlistment intention.

Let E and EI be unobserved (latent) variables denoting enlistment and enlistment intention probabilities, respectively. Further, let X denote a vector of demographic variables. Consider the following set of equations for enlistment decision and intention:

---

[3]The procedure requires the enlistment intention equation to contain some variables not included in the enlistment equation. Decisions concerning which variables to include in each equation were based on both hypothesized relationships and exploratory analyses. For example, based on earlier work (Orvis and Gahart, 1985) military contacts were assumed to predict positive enlistment intentions but to have minimal carryover on enlistment, controlling for intention level. The same assumption applied to region of residence, perceived Case of finding full-time employment, and high school grade point average (GPA), a measure of scholastic aptitude. Among high school students, age and employment variables also fell into this category: age because younger students tend to have higher intention levels but, eventually, similar enlistment rates to seniors; employment variables because among high school students the variables are related more to perceived employability than to actual employment status at the time of the enlistment decision. The remaining distinctions were made empirically.

$$EI_i = \alpha X_{1i} + u_i \tag{D.1}$$

$$E_i = \beta X_{2i} + \gamma_i EI_i + v_i \tag{D.2}$$

$$\gamma_i = \bar{\gamma} + w_i \tag{D.3}$$

Equation (D.1) relates demographics to intentions; Eq. (D.2) relates demographics and intention to the enlistment decision; and Eq. (D.3) represents the variable impact of intentions on enlistment. Thus, we have a system of simultaneous equations with a random coefficient on enlistment intention in the enlistment equation.

The intention measure is observed only for applicants who have not enlisted by the survey date, however. Thus, a nonrandom missing data problem exists. If unadjusted, the absence of responses from enlistees leads to inconsistent parameter estimates in the intention equation. Therefore, a selectivity Eq. (D.4) is added to the model. Let the variable D represent the presence/absence of EI. Further, let D be determinable from a set of demographics. Thus, the full model is written as

$$EI_i = \alpha X_{1i} + u_i$$

$$E_i = \beta X_{2i} + \gamma_i EI_i + v_i$$

$$\gamma_i = \bar{\gamma} + w_i$$

$$D_i = \theta X_{3i} + e_i \tag{D.4}$$

Here, u and e are correlated by construction; e and v are correlated because EI is missing only when an applicant has enlisted; u and v are correlated by implication; w_i is independent of u, v, and e.

The correlation between EI and E disallows the direct use of EI in the enlistment equation; the presence of intention measures in the enlistment equation would lead to inconsistent estimates. Replacing EI with an "instrumental-variable" (αX_1) alleviates the problem. Thus, in reduced form, the model is written as:

$$EI_i = \alpha X_{1i} + u_i \tag{D.5}$$

$$E_i = \beta S_{2i} + \bar{\gamma} * (\alpha X_{1i}) + \epsilon_i \tag{D.6}$$

$$D_i = \theta X_{3i} + e_i \tag{D.7}$$

where $\epsilon_i = (\alpha X_{1i}) * w_i + v_i$ (D.8)

Since probit analysis employs normality with unit variances, the joint distribution of the error terms when intentions are observed is

$$\begin{bmatrix} \epsilon \\ u \\ e \end{bmatrix} \sim N \left[\begin{bmatrix} 0 \\ 0 \\ 0 \end{bmatrix}, \begin{bmatrix} 1+\sigma_w^2(\alpha X_1)^2 & & \\ \rho_{u\epsilon} & 1 & \\ \rho_{e\epsilon} & \rho_{eu} & 1 \end{bmatrix} \right]$$

and when intentions are not observed is

$$\begin{bmatrix} \epsilon \\ e \end{bmatrix} \sim N \left[\begin{bmatrix} 0 \\ 0 \end{bmatrix}, \begin{bmatrix} 1+\sigma_w^2(\alpha X_1)^2 & \\ \rho_{e\epsilon} & 1 \end{bmatrix} \right]$$

MLE will derive estimates for the parameters in Eqs. (D.5) through (D.8). The likelihood that an individual will enlist when intentions are observed is

$$\mathcal{L}(E, EI \mid D = 0) = \int_{d^0}^{d_i} \int_{e^0}^{e_i} \int_{ei_0}^{ei_1} \varphi(e, \epsilon, u)\, du\, d\epsilon\, de \tag{D.9}$$

and the likelihood of enlistment when intentions are not observed is

$$\mathcal{L}(E \mid D = 1) = \int_{d^0}^{d_i} \int_{e^0}^{e_i} \varphi(e, \epsilon)\, d\epsilon\, de \tag{D.10}$$

where φ is the standard multivariate normal probability density function.[4]

[4]Schutz (1983) describes the computer software used to derive the MLEs. The document also summarizes MLE theory, optimization methods, and convergence criteria. Owen (1956) and Steck (1959) describe algorithms for computing bivariate and trivariate cumulative normal probabilities, respectively.

The discrete values associated with EI, E, and D determine the range of integration in Eqs. (D.9) and (D.10). For the enlistment intention equation, we integrate from ei_0, specifically, from

$$-\infty \text{ to } \tau_1 - \alpha X_1 \quad \text{when EI} = 1, \text{ definitely will not enlist;}$$

$$\tau_1 - \alpha X_1 \text{ to } -\alpha X_1 \quad \text{when EI} = 2, \text{ probably will not enlist;}$$

$$-\alpha X_1 \text{ to } \tau_3 - \alpha X_1 \quad \text{when EI} = 3, \text{ uncertain if will enlist;}$$

$$\tau_3 - \alpha X_1 \text{ to } \tau_4 - \alpha X_1 \quad \text{when EI} = 4, \text{ probably will enlist; and}$$

$$\tau_4 - \alpha X_1 \text{ to } +\infty \quad \text{when EI} = 4, \text{ definitely will enlist.}$$

For the enlistment equation, we integrate from d_0 to d_1, specifically, from

$$-\infty \text{ to } -[\beta X_2 + \bar{\gamma} * (\alpha X_1)] \quad \text{when E} = 0, \text{ did not enlist; and}$$

$$-[\beta X_2 + \bar{\gamma} * (\alpha X_1)] \text{ to } +\infty \quad \text{when E} = 1, \text{ did enlist.}$$

For the selectivity equation, we integrate from d_0 d_1, specifically, from

$$-\infty \text{ to } -\theta X_3 \quad \text{when D} = 0, \text{ intention (EI) observed; and}$$

$$-\theta X_3 \text{ to } +\infty \quad \text{when D} = 1, \text{ intention (EI) missing.}$$

Figures D.1 through D.3 show the partitioning of the marginal probability space for the intention, enlistment, and selectivity equations, respectively.

National Survey Enlistment Decision/Intention Model

Again, a multivariate probit model provides estimates of the relationship between enlistment and enlistment intention. Consider the following set of equations for enlistment decision and intention:[5]

$$EI_i = \alpha X_{1i} + u_i \tag{D.11}$$

$$E_i = \beta X_{2i} + \gamma EI_i + v_i \tag{D.12}$$

[5]A random coefficient equation for γ was omitted because of the limited variability of enlistment intention responses.

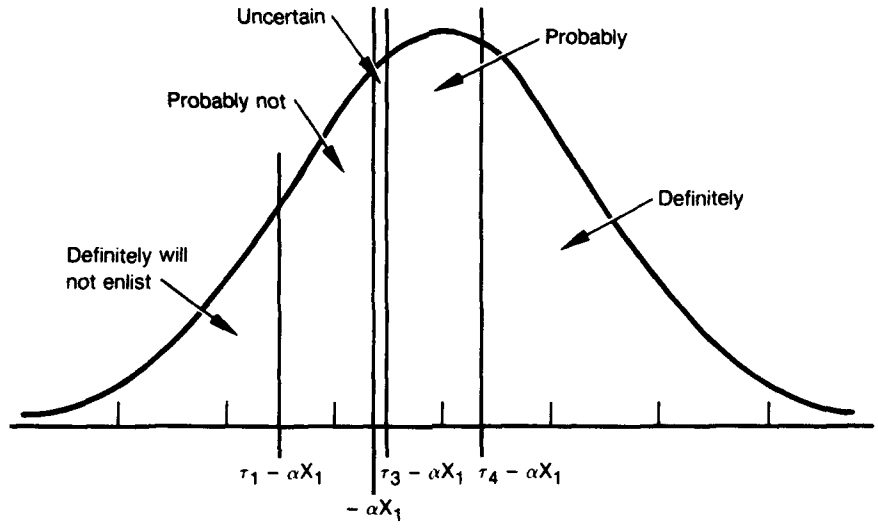


Fig. D.1—Probability space for the applicant enlistment intention equation

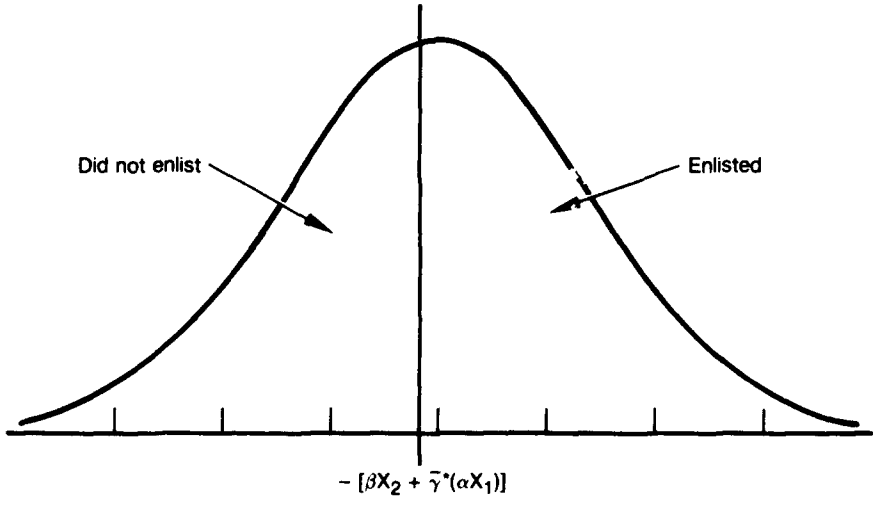


Fig. D.2—Probability space for the applicant enlistment equation

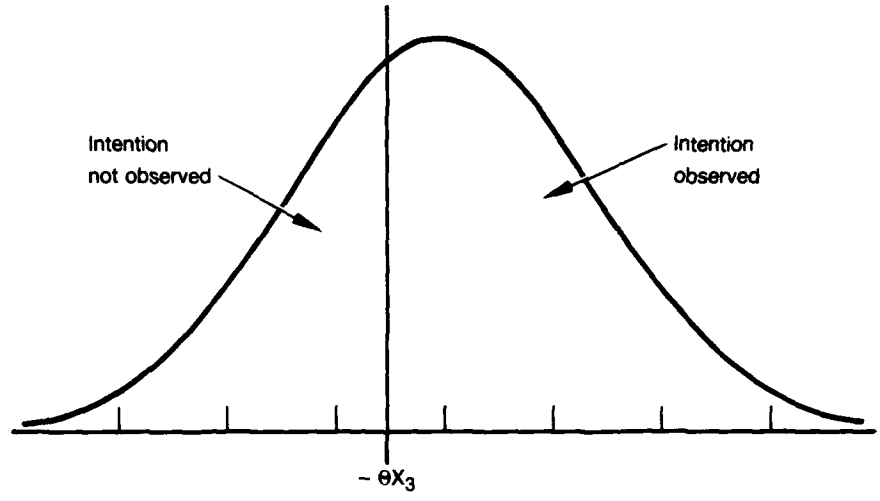


Fig. D.3—Probability space for the applicant selectivity equation

As before, the correlation between EI and E disallows the direct use of EI in the enlistment equation. Replacing EI with an instrumental-variable (αX_1) alleviates the problem. Thus, the full model becomes[6]

$$EI_i = \alpha X_{1i} + u_i \tag{D.13}$$

$$E_i = \beta X_{2i} + \gamma^*(\alpha X_{1i}) + v_i \tag{D.14}$$

where the joint distribution of the error terms is

$$\begin{bmatrix} v \\ u \end{bmatrix} \sim N \left[\begin{bmatrix} 0 \\ 0 \end{bmatrix}, \begin{bmatrix} 1 & \\ \rho_{uv} & 1 \end{bmatrix} \right]$$

MLE will derive estimates for the parameters in Eqs. (D.13) and (D.14). The likelihood that an individual will enlist is

$$\mathcal{L}\,(E,EI) = \int_{e_0}^{e_1} \int_{ei_0}^{ei_1} \varphi\,(v,u)\,du\,dv \tag{D.15}$$

[6]No selectivity equation is required because intentions are observed for all respondents.

The discrete values associated with EI and E determine the range of integration in (D.15). For the enlistment intention equation we integrate from ei_0 to ei_1, specifically, from

$-\infty$ to $-\alpha x_1$ when EI = 0, negative enlistment intention; and

$-\alpha X_1$ to $+\infty$ when EI = 1, positive enlistment intention.

For the enlistment equation, we integrate from e_0 to e_1, specifically, from

$-\infty$ to $-[\beta X_2 + \gamma^*(\alpha X_1)]$ when E = 0, did not enlist; and

$-[\beta X_2 + \gamma^*(\alpha X_1)$ to $+\infty$ when E = 1, did enlist.

Figures D.4 and D.5 show the partitioning of the marginal probability space for the intention and enlistment equations, respectively. For illustrative purposes, the parameter estimates for Eqs. (D.13) and (D.14) are shown in Tables D.2 and D.3. The coefficients were used for the simulations reflected in Fig. D.2, Table D.2 and Table D.4. A simulation example is provided for a typical high school student at the end of this subsection (using Table D.2).

Simulation Procedure

Predicting the enlistment rate for a hypothetical option involves simulating the enlistment decision of each respondent under the particular option. The simulation procedure uses the enlistment decision/intention model estimates to convert enlistment intentions into enlistment rates. It assumes that the relationships between demographic variables, intention measures, and enlistments remain constant across incentive packages. This assumption stems from the estimation of α and β in conjunction with the enlistment decision (i.e., by Eqs. (D.6 and D.4). Since actual enlistment decisions are not observed for the hypothetical incentive packages, reestimation of α and β is not possible. Thus, differences in enlistment rates across incentive packages will be a result of differences in intention responses.[7]

[7]Although empirically necessary, this procedure seems reasonable. In effect, it assumes that demographic, family, job, and academic factors that affect an individual's opportunities and likelihood of enlisting at baseline will continue to do so in a similar way under alternative incentives.

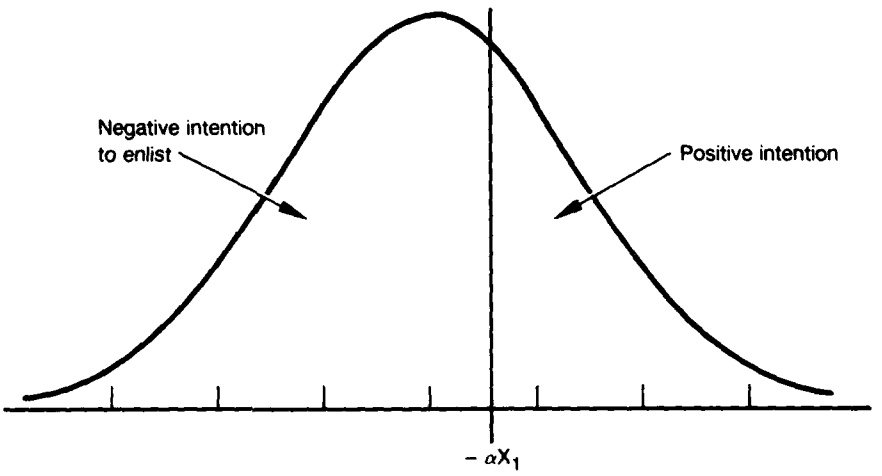


Fig. D.4—Probability space for the national sample enlistment intention equation

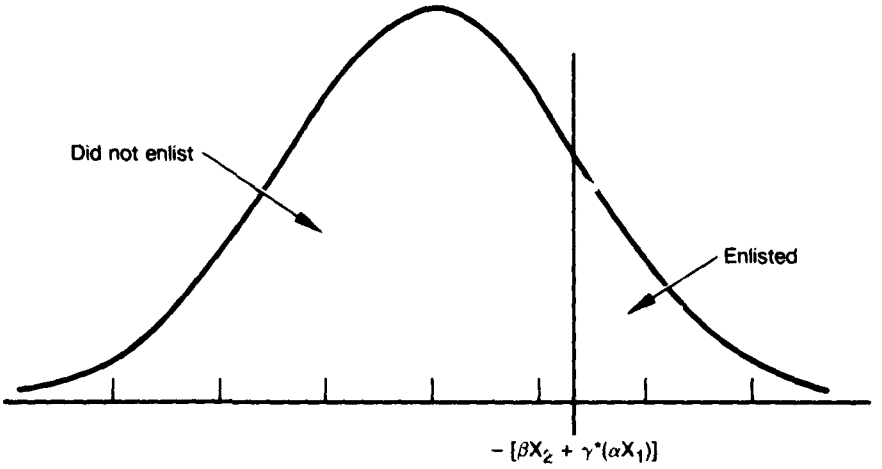


Fig. D.5—Probability space for the national sample enlistment equation

Table D.2

PARAMETER ESTIMATES FOR HIGH SCHOOL STUDENTS IN THE NATIONAL SAMPLE

Factor	Parameter Estimate	T-statistic[a]
I. Enlistment intention equation (EI)		
Constant	6.445	7.37
Demographic characteristics		
Race (vs. white, non-Hispanic)		
Black	.272	6.24
Hispanic	.147	2.09
Age[b]	−.2.154	−6.98
Region (vs. South)		
East	−.029	−0.78
North Central	−.174	−5.06
West	−.022	−0.49
Father's education (vs. did not complete high school)		
Completed high school	−.073	−1.98
Some college	−.262	−6.37
Economic opportunities		
Current job status (vs. employed *part-time or out of the labor force*)		
Employed full-time	−.082	1.21
Looking for work	.143	4.71
Ease of finding full-time employment[c]		
Academic history		
Grade-point average[d]	−.148	−6.87
Courses completed in high school		
Basic science	−.082	−2.96
Elementary algebra	−.079	−2.36
Plane geometry	−.153	−4.83
Intermediate algebra	−.094	−3.00
Trigonometry	−.196	−4.41
Military contacts		
Recruiter contact during past 6 months	.423	13.79
II. Other parameters in enlistment equation (E)		
Constant	−1.087	−22.68
Gamma	.674	9.70

Table D.2—continued

Factor	Parameter Estimate	T-statistic[a]
Demographic characteristics		
Race (vs. white, non-Hispanic)		
Black	−.058	1.05
Hispanic	.134	1.59
Father's education (vs. did not complete high school		
Completed high school	.146	3.03
Some college	.151	2.65
Academic history		
Courses completed		
Elementary algebra	−.056	1.34
Trigonometry	−.126	−2.00

[a]T-statistics with an absolute value of 1.96 or greater differ significantly from chance at the .05 level.

[b]Measure is the natural log of age in years.

[c]Uses four-point scale: 1 = almost impossible; 4 = not difficult at all.

[d]Uses four-point scale: 1 = mostly Ds and Fs; 4 = mostly As.

Table D.3

PREDICTED INCREASE IN ENLISTMENT RATES FOR HYPOTHETICAL ENLISTMENT OPTIONS[a]
(Percentage points)

	Respondent Characteristics				
	Low Aptitude		High Aptitude		
Option	In High School	Not In High School	In High School	Not In High School	Average
$ 5000 bonus	0.7	0.5	0.7	0.3	0.5
$ 9000 bonus	2.2	0.8	1.4	0.7	1.4
$15,000 bonus	3.4	1.4	3.2	1.5	2.5
$ 9000 benefit	1.4	0.3	1.2	0.5	0.9
$15,000 benefit	2.6	0.8	2.7	1.0	1.9
$23,000 benefit	3.4	1.3	4.0	1.7	2.8
Average increase	2.3	0.9	2.2	0.9	1.7
Baseline enlistment rate	19.2	8.4	11.3	7.3	12.3
(N)	(233)	(164)	(215)	(153)	(765)

[a]Rates apply to general entitlements with no eligibility, job, or service restrictions.

For each hypothetical incentive package, the procedure averages across individual respondent's predicted probabilities of enlistment given their stated enlistment intention. The expected enlistment rate for the *jth* incentive package is

$$\Pr(E)_j = (1/n) \sum_{i=1}^{n} \Pr(E_i = 1 \mid EI = ei_{ij})$$

where ei_{ij} is the *ith* individual's intention response to the *jth* hypothetical incentive package.

Applicant Simulation. For applicants, the expected enlistment rate for the *jth* hypothetical option when intentions are observed is

$$(1/n) \sum_{i=1}^{n} \Pr(E_i = 1 \mid EI = ei_{ij}) =$$

$$(1/n) \sum_{i=1}^{n} \int_{a_i}^{\infty} \int_{ei_{0ij}}^{ei_{1ij}} \Phi(u_{ij}, \epsilon_i)\, du_{ij}\, d\epsilon_i \Big/ \int_{ei_{0ij}}^{ei_{1ij}} \Phi(u_{ij})\, du_{ij}$$

and when intentions are missing is

$$(1/n) \sum_{i=1}^{n} \Pr(E_i = 1 \mid D = 1) = (1/n) \sum_{i=1}^{n} \int_{a_i}^{\infty} \Phi(\epsilon_i)\, d\epsilon_i$$

where $a_i = -[\beta X_{2i} + \overline{\gamma}^*(\alpha X_{1i})]$.

The range of integration for the enlistment intention equation, ei_{0ij} to ei_{1ij}, is

$-\infty$ to $\tau_1 - \alpha X_{1i}$ when $EI_{ij} = 1$, definitely will not enlist;

$\tau_1 - \alpha X_{1i}$ to $-\alpha X_{1i}$ when $EI_{ij} = 2$, probably will not enlist;

$-\alpha X_{1i}$ to $\tau_3 - \alpha X_{1i}$ when $EI_{ij} = 3$, uncertain if will enlist;

$\tau_3 - \alpha X_{1i}$ to $\tau_4 - \alpha X_{1i}$ when $EI_{ij} = 4$, probably will enlist; and

$\tau_4 - \alpha X_{1i}$ to $+\infty$ when $EI_{ij} = 5$, definitely will enlist.

National Sample Simulation. For a national sample, the data required to estimate the effect of hypothetical options may require the use of a second survey. This problem arises because a long followup frequently is required to obtain enlistment information. By the time enlistment results are known, intention data may be out of date. Moreover, once established, enlistment equations need reestimation only periodically; thus, intention responses to incentives of interest may be collected in separate surveys as needed. In this instance, the simulation made for the national youth population requires that enlistment rates under hypothetical incentive packages be derived from both the Grey Advertising Survey data and the YATS-MRS database. The YATS data contain baseline intention measures and information about enlistment, whereas the Grey data contain intention measures for hypothetical packages but no information about enlistment. As required, both datasets represent random samplings of American youth and contain similarly structured intention questions.

For the national sample, the expected enlistment rate for the *jth* hypothetical incentive package is

$$(1/n) \sum_{i=1}^{n} \Pr (E_i = 1 \mid EI = ei_{ij}) =$$

$$(1/n) \sum_{i=1}^{n} \int_{a_i}^{\infty} \int_{ei_{0ij}}^{ei_{1ij}} \Phi (u_{ij}, \epsilon_i)\, du_{ij}\, d\epsilon_i \Big/ \int_{ei_{0ij}}^{ei_{1ij}} \Phi (u_{ij})\, du_{ij}$$

where $a_i = - [\beta X_{2i} + \gamma^*(\alpha X_{1i})]$,

and the range of integration for the intention equation, ei_{0ij} to ei_{1ij}, is

$- \infty$ to $- \alpha X_{1i}$ when $EI_{ij} = 0$, negative enlistment intention; and

$- \alpha X_{1i}$ to ∞ when $EI_{ij} = 1$, positive enlistment intention.

An illustration of the simulation is provided below.

Consider a hypothetical high school student with the following characteristics: white; age 17; lives in the West; father attended college; reports it is somewhat difficult to find full-time employment; has received mostly Bs in high school; has completed basic science, elementary algebra, and plane geometry; and has been in contact with a recruiter during the past six months.

First, using the information in Table D.2, we compute αX_{1i}, βX_{2i}, and α_i[8]

αX_{1i} (enlistment intention) =

Alpha (6.445) + Black (0) + Other nonwhite (0) +

Age ($-2.154 \times$ natural log of 17 = -6.103) + East (0) + North Central (0) + West ($-.022$) +

Father completed high school (0) + Father attended college ($-.262$) +

Employed full-time (0) + Looking for work (0) +

Ease of finding full-time employment ($2 \times -.034 = -.068$) +

Grade-point average ($3 \times -.148 = -.444$) + Basic science ($-.082$) +

Elementary algebra ($-.079$) + Plane geometry ($-.153$) + Intermediate algebra (0) +

Trigonometry (0) + Recruiter contact (.423) = $-.345$.

βX_{2i} (other parameters in enlistment equation) =

Beta (-1.087) + Black (0) + Other nonwhite (0) +

Father completed high school (0) + Father attended college (.151) +

Elementary algebra ($-.056$) + Trigonometry (0) = $-.992$.

$a_i = -[\beta X_{2i} + \gamma^*(\alpha X_{1i})]$, taking gamma from Table D.2,

$= -[-.992 + .674(-.345)] = 1.225$.

With these results, we can now estimate the respondent's probability of enlisting under the *jth* hypothetical incentive package, using the procedure described above.

$$\Pr \frac{E_i = 1}{EI = ei_{ij}} = \frac{\int_{a_i}^{\infty} \int_{ei_{0ij}}^{ei_{1ij}} \Phi(u_{ij}, \epsilon_i)\, du_{ij}\, d\epsilon_1}{\int_{ei_{0ij}}^{ei_{1ij}} \Phi(u_{ij})\, du_{ij}}$$

[8]Many of the variables in Table D.2 are dummy variables. Respondents receive a score of 0 if they do not have the characteristic indicated. For example, since our hypothetical respondent is white, he receives scores of 0 for the black and other nonwhite dummy variables.

If the respondent's stated enlistment intention for incentive j is negative, his predicted enlistment probability is:

$$\Pr \frac{\text{Enlist}}{\text{Negative intention}} = \frac{\int_{1.225}^{\infty} \int_{-\infty}^{.345} \Phi(u_{ij},\epsilon_i)\, du_{ij}\, d\epsilon_1}{\int_{-\infty}^{.345} \Phi(u_{ij})\, du_{ij}} = \frac{.0413}{.6350} = .065$$

If his stated intention under option j is positive, his predicted enlistment probability is:

$$\Pr \frac{\text{Enlist}}{\text{Positive intention}} = \frac{\int_{1.225}^{\infty} \int_{.345}^{\infty} \Phi(u_{ij},\epsilon_1)\, du_{ij}\, d\epsilon_i}{\int_{.345}^{\infty} \Phi(u_{ij})\, du_{ij}} = \frac{.689}{.3650} = .189$$

The enlistment rate under a hypothetical incentive package is approximated by averaging the predicted enlistment probabilities of all respondents under the option. Each respondent contributes a unique enlistment probability, which is conditional on his stated enlistment intention in response to the option. The overall results can be compared to the baseline enlistment rate to assess the impact of the option on increasing enlistments.

APPLICATION OF METHODS IN SEC. IV

The figures and tables in Sec. IV draw on results from both of the methods discussed in this appendix. We next provide supplemental data and discussion to aid the reader in understanding how the results were determined.

In Fig. 4.1, enlistment rates for enlistment bonus options of $5000, $9000, and $15,000 and for educational benefit options of $9000, $15,000, and $23,000 were computed by applying the "simple" method to the intention responses obtained in the indicated surveys. Next, point-slope interpolation was applied to the educational benefit results to estimate the nominal benefit value producing the same change in enlistments as each enlistment bonus option. This process is illustrated in Fig. D.6.[9]

[9]In the 1983 Applicant Survey, an $8000 option value was used in lieu of $9000. The results in Fig. 4.1 for 1983 applicants thus required additional interpolation for both types of options, i.e., from $8000 to $9000.

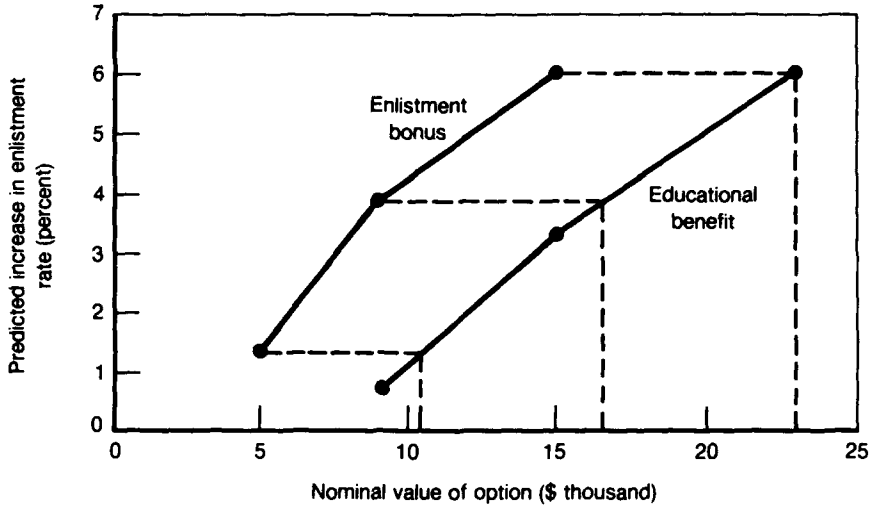


Fig. D.6—Interpolation of options' predicted effects on enlistment

Table 4.3 gives the results of an analysis of variance applied to changes in enlistment rates predicted for national survey respondents by the multivariate method. The predicted changes are shown in Table D.3. The reader should bear in mind that the rates are based on enlistment in any active duty service and for any military occupational specialty (MOS). The approach could, however, be applied by service and selected specialties.

The analysis described in Tables 4.4 and 4.5 employs several changes in procedures from those used in the analysis in Table 4.3. The changes are required because we wish to focus the analysis on "high quality" respondents, Army enlistees, and on selected occupational specialties, i.e., those military specialties qualifying for the Ultra-VEAP option or $8000 bonus option. Focusing the analysis on high quality respondents was straightforward; the procedures described in Sec. IV were used. Respondents predicted to score at or above the 50th percentile on the AFQT who were (1) high school graduates or (2) still in high school, i.e., not dropouts, were considered to be "high quality." Next, because the UVK educational benefit and $8000 enlistment bonus programs were Army programs, the enlistment equation used in the multivariate procedure was reestimated to provide coefficients for enlisting in the Army in particular, rather than for active duty in

general. Finally, to limit the analysis to eligible specialities, the proportions of MOS eligible for the UVK and $8000 bonus options were determined, based on high quality enlistments during the baseline years for the tests. According to enlistment records, the proportion of enlistments in eligible specialties was .534 for the Educational Assistance Test Program and .298 for the Enlistment Bonus Test. These proportions were applied in the analysis as described below.[10]

The analysis required estimating the change in Army enlistments from the control cell in the Educational Assistance Test Program (EATP) to the Ultra-VEAP Kicker cell, and from the $5000 cell to the $8000 cell in the Enlistment Bonus Test. It was assumed that the control cell of the EATP was worth $10,400. This figure was determined by averaging the total benefit values of $12,100 and $14,100 for three- and four-year enlistments, respectively, and subtracting the enlistee's contribution of $2700 (see Fernandez, 1982). The UVK cell was valued at $17,400, based on a total payout of $20,100 to three-or four-year enlistees, less their contribution of $2700.

Applying the multivariate method to the survey results for high quality youth yielded the predicted Army enlistment rates shown below.

	Nominal Benefit Value			Bonus Value	
School Status (proportion)	$9000	$15,000	$23,000	$5000	$9000
In high school (.6345)	.0265	.0306	.0341	.0251	.0272
Not in high school (.3655)	.0157	.0177	.0202	.0150	.0168
Total	.0226	.0259	.0290	.0214	.0234

The results were weighted by school status—using the indicated proportions determined from YATS data—and were combined to give an overall enlistment rate for each option. The results for the $9000 and $15,000 benefit options were then interpolated to estimate the enlistment rate for the control option value of $10,400, and the results for the $15,000 and $23,000 benefit options were interpolated to estimate enlistments under the UVK value of $17,400. Estimation for the $5000 bonus control cell value was straightforward; for the $8000 value, the

[10]Separate enlistment models for the eligible specialties were estimated initially. They generated effects very close to those generated by applying the indicated constants. Therefore, the simpler procedure of modeling Army enlistments and applying an eligibility constant was used.

results for the $5000 and $9000 options were interpolated. These operations yielded the following results (within rounding).

	Nominal Benefit Value		Bonus Value	
	$10,400	$17,400	$5000	$8000
Predicted enlistment rate, all specialties	.0233	.0268	.0214	.0229

The predicted enlistment rate for the higher value cell was weighted by the proportion of eligible specialties and added to the control cell enlistment rate (weighted by the proportion of ineligible specialties) to estimate total, high quality enlistments. The result was divided by the enlistment rate for the respective control cell to yield the percentage increase, as follows.

Increase due to UVK program (7.9 percent, within rounding):

Enlistments in UVK cell/Enlistments in control cell

$$[(.5344)(.0268) + (.4656)(.0233)] / .0233 = 1.079$$

Increase due to $8000 bonus (2.1 percent, within rounding):

Enlistments in $8000 cell/Enlistments in control cell

$$[(.2985)(.0229) + (.7015)(.0214)] / .0214 = 1.021$$

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